

From boatanchors@theporch.com Thu Jun 15 03:13:45 1995
Date: Wed, 14 Jun 1995 22:13:45 -0500
Message-Id: <F6EM1029.F6EM1039@mail.admin.wisc.edu>
From: TOM.A.ADAMS@mail.admin.wisc.edu
Subject: "City of New Orleans"

to: boatanchors@theporch.com

Hello Jack.

Re. "City of New Orleans":

Sorry to disagree with you, but the Danoffs didn't write it.

It was written by my fellow Chicagoan, the late Steve Goodman. Actually, the song everyone knows now is the second version; in Old Town (as in Win Strake's "Old Town School of Folk Music") all of us wannabe folkies were singing the original in the late '60s, 5 years before Arlo et. al. recorded thier versions.

73's,

Tom, K9TA

From boatanchors@theporch.com Wed Jun 14 11:17:52 1995
Date: Wed, 14 Jun 1995 06:17:52 -0500
Message-Id: <2FDEEE7A@smtpgate.rfc.comm.harris.com>
From: "Gable, Edward M" <emg@rfpo2.rfc.comm.harris.com>
Subject: RE: ...no subject...

++++
2.5 OR 6.3 VOLT FILAMENT ?
Ed K2MP @ Rochester
EMG@RFC.COMM.HARRIS.COM
++++

To collectors of 30's vintage gear:

Does anyone have a 'doghouse' power supply for a National SW-3 which they would be willing to sell? Even one in rough shape would be nice... I'm not afraid of restoration work.

Thank you.

John Martin

From boatanchors@theporch.com Wed Jun 14 21:46:51 1995
Date: Wed, 14 Jun 1995 16:46:51 -0500
Message-Id: <Pine.LNX.3.91.950614155049.20853C-1000000@thelair.zynet.com>
From: johnb@thelair.zynet.com
Subject: >> wanted: Howard Rx <<

The title says it all! Looking for a Howard receiver in restorable condition. to add to my working collection.

thanks!
/john

John M. Brewer wb5oau
johnb@thelair.zynet.com

From boatanchors@theporch.com Wed Jun 14 23:46:00 1995
Date: Wed, 14 Jun 1995 18:46:00 -0500
Message-Id: <n1408967027.98402@msmailgw1.arlut.utexas.edu>
From: "rohre" <rohre@arlut.utexas.edu>
Subject: Acetone follow up

I mis- listed Acetone as a proved carcinogen.

Consultation with experienced chemist and list member Barry Ornitz corrected my information. Thanks Barry.

He agrees there is the significant flammable risk.

My information source in "Accident Prevention Manual for Shop Teachers", (W. W. Williams) stated : "Vapor concentrations between 2.55% to 12.8% by volume in air ARE EXPLOSIVE." (Emphasis mine).

No real chemical was referenced or intended to be referenced in quoting Fire Dept slang, "tetra-ethyl bad stuff". Many complex compounds when used as intended are very beneficial. Any inference to real compounds of similar name was not intended.

By personal experience, I did suffer considerable dermatological irritation, and breathing distress from concentration of Acetone vapors at a younger age; in the interests of group safety, I was merely trying to alert the group to its need to be used with personal protective clothing and caution.

Thanks also to Barry for pointing out, brake fluids may be more harmful to health than acetone; and would be of no use in cleaning off some paints. (Best to try to identify what type of paint it is, and if strippers do not get it all, use the appropriate solvent made for that paint removal, wouldn't you agree, Barry?)

The availability in paint stores should not be a problem; however, in my local area, a number of paint products are limited in sale because of narcotic uses by minors.

Barry, is the acetone in nail polish remover diluted, or just modified by the coloring agents and perfumes? And those other ingredients probably make it of limited use?

A very good point, when using flammables, have an adequate home fire extinguisher, and if not in a 911 area, know your local emergency numbers. And did you know that after partial use, a pressurized fire extinguisher MUST be totally recharged, for the pressure will continue to leak off after use of the dry chemical types? (The seal does not reseal with powder in the valve.)

73,
Stuart

From boatanchors@theporch.com Wed Jun 14 23:09:50 1995
Date: Wed, 14 Jun 1995 18:09:50 -0500
Message-Id: <01HRPEKD4C9U9KSASH@RANDB.PPRD.Abbott.Com>
From: KANAMAA%AMGATE%MATRXA@randb.pprd.abbott.com
Subject: Alice's Valve shop

From: Kana, Michael (D9CY)
Date: Wed, Jun 14, 1995 6:06 PM
Subject: Alice's Valve shop
To: bigboats
You can get most any tube you want at Alice's Radio/Tv shop...

Needs work but has promise...

73's de AA9IL
Mike Kana

(I dont want a pickle, I just wanna drive my 813...)
And other Arlo Guthrie-isms

From boatanchors@theporch.com Wed Jun 14 13:00:39 1995
Date: Wed, 14 Jun 1995 08:00:39 -0500
Message-Id: <9506141258.AA03806@syseng1.se.melpar.esys.com>
From: pbock@melpar.esys.com (Paul H. Bock)
Subject: AN/SRR-13 vs. AN/URR-13

Re the discussion of the SRR-13 seen at Fair Radio: It was probably a URR-13, not SRR-13. The AN/SRR-11, -12, and -13 were the Navy's 1950s standard shipboard receivers and covered LF, MF, and HF, respectively. The AN/URR-13 was a 225-400 MHz receiver nicknamed a "RED" because it was used in conjunction with the TED-() series UHF transmitters. It was later replaced by the AN/URR-35, which covered the same frequency range and picked up the same nickname ("RED").

I studied the AN/SRR- series receivers in ET school (compared to a -390A, an SRR is a piece of - well, you know), as well as the AN/URR-13/35 and the TED. I also worked on TEDs and REDs (-35 version) aboard ship. Decent equipment, not too sensitive (high noise figure) but with a preamp it might be fun to play with.

73,

Paul, K4MSG

(|_|) * Paul H. Bock, Jr. * Principal Systems Engineer
| |) * ETCM (USNR, RET) * Internet: pbock@melpar.esys.com
* Telephone: (703) 560-5000 x2062

From boatanchors@theporch.com Thu Jun 15 02:57:21 1995
Date: Wed, 14 Jun 1995 21:57:21 -0500
Message-Id: <Chameleon.4.01.2.950614224544.jproc@>
From: jproc@worldlinux.com
Subject: BA Aromas

>Someone in a previous mentioned the smell of these places. It was of
>course a heavenly scent. If someone bottles a perfume derived from 40s
>vintage radio fungicide, radio wackos of a certain age will be as putty in
>the hands of any female who wears it. Well, I will anyway. Even today I
>occasionally open the bottom of one of my BC-611s for a little... sniff.

>

Dick,

I always wanted to start a thread on the "aroma" of an old BA but was too shy for fear that people would think that I'm nuts (or confirmation of same). It nice to know that I have company.

When I was in my mid-teens, I always patronized an electronics store in Hamilton Ontario on Saturdays. The owner was a cigar smoking electronics expert who always dispensed great globs of advice and knew the answer to each of my questions. The cigar smoke and the various aromas from certain components combined into a unique mixture which I can never forget. Two years ago, I visited a local surplus store here in Toronto for the first time on a Saturday. Guess what? - another cigar smoking owner who had snappy answers to my questions. Immediately, I forgot the purpose of my visit and my mind filled with those wonderful memories and those Saturdays spent in the store in Hamilton.

In 1961, on my first visit to the ham radio store in Hamilton, I was greeted by the scent of aromatic pipe tobacco. Eventually, I learned to associate the sight of amateur gear and B&W coil stock with pipe smoke. Nowadays, it is very rare to find a pipe smoker, but guess what happens when I do get pipe smoke drifting my way - I immediately drift off into old, warm, memories of of Johnson and Hallicrafters equipment. It just goes to show how powerful our sense of smell can be in stimulating memory recall. There must be some practical application of this phenomenon but I haven't figured it out just yet.

As of 1992, I have become accustomed to yet another BA smell. Believe it or not, the Marconi CSR5A receivers aboard Haida are still 'gassing' slightly after 50 years. I can't quite describe the aroma, however, when I get a whiff of freshly dried alkyd paint, I immediately start to daydream about some new radio restoration activity aboard a ship. Dick - if you can bottle and ship me Essence of 611, I'll swap you for Cologne de Marconi #5A.

So... what's everyone's favourite BA aroma?

Regards,

Jerry Proc VE3FAB
E-mail: jproc@worldlinx.com
Radio Restoration Volunteer

HMCS Haida Toronto, Ontario

From boatanchors@theporch.com Wed Jun 14 16:52:08 1995
Date: Wed, 14 Jun 1995 11:52:08 -0500
Message-Id: <199506141649.MAA19315@cc01du.unity.ncsu.edu>
From: rdkeys@unity.ncsu.edu
Subject: Re: BA On-Line Manuals testing (cont.)

>
> >Yup, had a mind fade for a second. Were you able to get the materials
> >off and try it. I would appreciate any feedback so I can fine-tune it
> >if necessary for the BA archives.
>
> Just got it from the Operator a minute ago, Bob. They had to run the
> job overnight as it took awhile to print. Here's what I see:
>
> a) First pages look OK up to p.16, which is blank except for
> header "Model LM-16 Heterodyne RF Meter and". Maybe just
> a blank page at the end of Chapter 2? Same thing on pp.20,
> 34, 42 the end of Chapters 3,4,5.

It is designed for both side printing. Hence an extra blank page
to clear the end of each chapter, etc. Also, for the flip side of
each figure. That is standard typography for books.

Maybe I need to try to bundle it up so that odd pages can be printed
first then the stack reversed and flipped and the even pages reprinted.
I will play with that on the TeX/LaTeX dvifiles.

> b) Most of the graphics (beginning on p.62) are missing.

As it is now, there are four graphics, Figures 19, 20, 21, and 24.
If I put all on, the thing would be 20 megabytes in size at high
resolution image reproduction in .ascii eps format. It does
compress relatively well for storage.

These four are all that are really needed to allow one to get the
meter up and running, and for minor servicing, etc.

I can put more figures in, but it will probably have to be printed out
in chunks, such as by chapter and by figure, or somesuch.

> There's a somewhat cryptic statement on p. 60 about the illustrations,

> to wit: "They should be in the same location where you found this manual..."
> Does this mean they have to be present as separate .eps files when I submit
> the lmmanual.ps job? I did happen to download lmfig19.eps, and figures 19,
> 20, and 21 do appear in my output, so that seems likely. No doubt you
> explain this somewhere for the TEX (or is it LaTeX?) challenged, but I
> missed it.

The separate files are needed if someone wants to recompile the manual.
I always like to include full sources with anything I do so that it
can always be together down the road.

I probably need to be clearer in the readme files.

Also, I probably need to be clearer on p. 60.

Basically the .ps files are complete printouts if one's system can
handle the whole at once. Many printers can't handle such large files
all at once.

The .tex, .eps, etc files are used to build the final printer output
file.

> John Michael

Aside from the inconsistencies and the need for more clarity, did
what you have print out OK?

Thanks for your comments and feedback!

Good Boatanchor Manuals don't come easy, but I still am convinced it
is a worthwhile long-term project. This is just the first iteration
thereof.

73/Bob/NA4G

From boatanchors@theporch.com Wed Jun 14 17:38:45 1995
Date: Wed, 14 Jun 1995 12:38:45 -0500
Message-Id: <199506141737.MAA18903@uro.theporch.com>
From: Jack Taylor <n7oo@hereford.ampr.org>
Subject: RE: Books FS

The book on "The Strategy of Electromagnetic Conflict" and the Operators
Manual for the T-42A aircraft have been spoken for. Thanks to all who
responded!

73 de Jack

From boatanchors@theporch.com Thu Jun 15 02:58:48 1995
Date: Wed, 14 Jun 1995 21:58:48 -0500
Message-Id: <F6EL5427.F6EL5437@mail.admin.wisc.edu>
From: TOM.A.ADAMS@mail.admin.wisc.edu
Subject: Broadcast blow-ups

to: boatanchors@theporch.com

A few folks here have asked for the horror stories of broadcast gear breakdowns. Gads, what sadists you are! Broadcast folks would rather forget 'em!

Exploding mice in transmitter B+ supplies have already been mentioned. This one seems to be pretty common. I can tell you from experience that the Gates 20H3 FM broadcast transmitter (20 KW out, B+ of about 9500 VDC) isn't a very mouseproof design; I had to go out several times to fix that one (I was chief, and my transmitter was 70 miles out of town!).

Somewhat more dramatic was the time a Great Horned Owl decided to land on the power pole outside, with each foot on a different phase of the 3 phase line feeding the site. Unfortunately, he did it on the section of line AFTER the power company fuses, and it seemed like it took forever for the power company to get there to change 'em. The bird itself was interesting. He got zapped just as he touched down, and died with his wings still outstretched (I wonder if the corpse glided?).

One of the best blow-ups (or at least the noisiest) was my own doing when I was a very new chief. MY site was gonna be the best in the network, I decided, so I started ordering parts like crazy to bring gear back up to original spec.

It seemed that the electronic weatherstripping on the PA cavity door of the 20H3 was bad, and the inside of the aluminum door showed severe carbon tracking near it. PA efficiency was way down, and I decided this was the cause.

I had Gates/Harris make a new cavity door, and ordered new weatherstripping. The only problem was that they had included no way to attach the stripping to the door. On the original, it appeared to be attached by some sort of conductive glue.

Being too impatient to call Gates and wait for mail delivery, I talked to the Director of engineering about the problem. What I didn't realize was that he hadn't worked on a transmitter in 25 years; I found later he hadn't been too good at it when he did, so they made him a paper pusher. He couldn't do very much damage that way.

"Get yourself some stainless steel sheet metal screws" he advised, "and just bolt the stripping in place on the PA cavity edge".

Being new and stupid, I did as I was told.

The stripping SHOULD have been a smooth, continuous strip. Instead, it was kinda lumpy with all those screws in it. Because of those gaps, some parts of the cavity door were at a different potential than others; VERY different.

When the rig was fired up, everything was OK... for about 10 seconds.

BLAM!!!

First impression; somebody's behind the transmitter with a 12 gauge pump gun. That notion was dispelled when the overload and fuse annunciator lamp panel lit up like a pinball machine.

A quick check showed that I hadn't, as I suspected, left a pair of pliers inside of the cavity. Nothing appeared amiss, so hit the B+ again.

Everything was normal. Well, let's dip the plate current a bit better...

BLAM!!!

Totally confused (and scared sh.tless by now), I dug up the Gates/Harris 24 hour tech service line's 800 number.

As the tech listened to my tale of woe, he began to chuckle. As I went on, it grew to a laugh. As I ended, he was roaring.

When he finally caught his breath, he advised me to get rid of those damned screws, and tie the stripping in place with skinned hookup wire thru the screw holes.

No further problem. As far as I know, this temporary fix is still in place.

The way I figure it, you're not REALLY a transmitter fixer until you've gone through a line burndown and lived to tell the tale.

High power transmission lines are pressurized to greater than barometric pressure, using dried air or dry, inert gas. The idea is to keep enough pressure inside to keep out moisture laden outside air in case of a leak in the outer conductor's joints, but not enough to CREATE a leak by blowing out the joint's rubber O-ring.

If this system fails, outside air leaks in and eventually moisture condenses

on one of the Teflon insulators that separate the inner and outer conductors. When that happens there's current flow across the insulator. The current will heat the Teflon, and it carbon tracks. When it tracks, the Teflon eventually gets hot enough to burn. When that happens, hot gasses carry soot up the line, and gravity pulls it down thru holes in the insulators below. The soot is conductive as hell, and the first indication of trouble that you get is when the transmitter VSWR monitor trips the rig off the air.

When you get to the site, the SWR bridge tells the story. You reduce power to the minimum, and watch reflected power. If the reading sorta walks around, it's time to call the tower crew.

The only thing to do is remove the transmission line, section by 20 foot section, and take it apart. Gallons of wood alcohol on rags are pulled thru the outer conductor to get rid of the soot, and the inner conductor sections that weren't melted are similarly cleaned, and burned insulators replaced.

You're talking 18 hour days during the summer, of filthy, back breaking work, hustling around line sections that can weigh up to a couple of hundred pounds for the the larger diameters. In winter, it's absolute hell.

I've been through two of these little parties, but I've been lucky. Both times it happened in good weather, and the transmission line was 3.125", which is relatively light weight.

Is it any wonder that there's a shortage of RF people in broadcasting these days? EVERYONE wants to stay in the studios and play with thier computers, and NOBODY even wants to know where the transmitter is!

73's,

Tom, K9TA

From boatanchors@theporch.com Thu Jun 15 06:17:00 1995
Date: Thu, 15 Jun 1995 01:17:00 -0500
Message-Id: <Pine.OSF.3.91.950614234841.5194B-100000@alpha.pr1.k12.co.us>
From: Terry Lee Ehrlich <terrylee@pr1.k12.co.us>
Subject: Re: Broadcast blow-ups

Blow ups! Not due to electrical failure...but a blow up just the same!

Old KLME...now new calls and a brand-new building...K0JO...Laramie, Wyoming in 1972.. Alan Boeker, DJ, on the air while natural gas was filling the studios, apparently due to an incorrectly installed furnace...

Al told me he had just opened the mike to back-tag a song..when literally the lights went out...the music quit in his earphones...and the next thing he knew he was sitting...he though...outside!

NOT! After he shook off the blast and looked around... the ENTIRE ground floor building had collapsed around him. Every wall had blown out..every inner wall had crumbled...the roof above Al had blown up...then had fallen totally around him. This good-sized, square building had come down around him as in a Buster Keaton movie.

He was still at the console with his fingers on the mic switch (open-air relays activated, sparked, and BOOM!) with an entire building sitting flatly around him! Shaken but totally unhurt...

Alan...where are you today?

Rick / Terry Lee

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=====
Richard T. Ammon      |    $$ BUYING OLD RADIO ANYTHING...$$
                      |    sets, parts, literature, magazines, etc
Terry Lee Ehrlich    (StepSon) |    Particularly interested in transistor
                      |    radios with "CD" markings at 640 & 1240
Join COLORADO RADIO COLLECTORS |    on the dial...smaller the better. Thanks!
=====
```

From boatanchors@theporch.com Wed Jun 14 19:08:26 1995
Date: Wed, 14 Jun 1995 14:08:26 -0500
Message-Id: <m0sLx1P-001802C@aupair.cs.athabascau.ca>
From: tech@cs.athabascau.ca (Richard Loken)
Subject: broadcast stories

Well if we are going to talk about frying bacon.

I once worked in a station with a LOT of mice. I used to come in at 6:00AM to turn on the rig and after I had hit the filiments I would wander around and tip over the garbage cans to let the mice out.

One day I was working in the hall beside the transmitter and as I glanced down the hall I heard the bang of the overload relay and a flash shot out across the hall from the glass window of our RCA TT2BH (a 2KW channel 7 rig that drove a 10KW amplifier) followed by two other flashes and bangs as the overload retried for three times and out. Most impressive!!...

Once I got the door open I found half a mouse on output of the HV transformer. I cleaned the mouse out and got the rig back up and half an hour it happened again and I had to clean another mouse out of the secondary insulators. I figure that when hubby didn't get home for his lunch that the wife went looking for him.

I will take this opportunity to complain about how RCA wired the pilot lights in their TT5EH. The lamps ran 12 or 20V or something through a series resistor off the 220V line. I once decided to change a burnt out pilot lamp during the 6:00 news, the lamp was a 328 type in a Microswitch push button assembly where you stick a metal puller in to grab the bulb. I stuck the tool in and shorted the two bulb leads together which provided a bang and a flash which pitted the front surface of my (glass) glasses and dumped the main breaker in the breaker panel. I ran over to turn the breaker back on and grabbed the breaker for the studio lights instead and now I had CJOC and CFCN both off the air in 15 seconds flat.

Some days...

Richard Loken VE6BSV, Systems Programmer - VMS : "...underneath those
Athabasca University : tuques we wear, our heads
Athabasca, Alberta Canada : are naked!"
** tech@cs.athabascau.ca ** : - Arthur Black

From boatanchors@theporch.com Wed Jun 14 14:04:51 1995
Date: Wed, 14 Jun 1995 09:04:51 -0500
Message-Id: <Chameleon.4.01.950614085506.dgibbs@meninx.ppp.verdix.com>
From: "R. Dennis Gibbs" <dgibbs@Rational.COM>
Subject: Re: Broken R-388 Kc circular dial

Greetings everyone,

This is in response to the person who had a broken R-388 circular KC dial (Sorry, I deleted the original message and can't remember who submitted the article)

Here are my suggestions:

- 1) Contact Mr. David Knepper, Box 34, 760 Forest Hills Dr., Sidman, PA 15955. He is the editor of The Collins Journal. He sells replacement circular KC dials for the Collins 75A series. He also sells replacement drum decals for the 75A series as well. I do not know if he has one for an R-388 or not, but it's worth a try. I don't have his phone number with me, but if this sounds interesting, contact me and I will dig up his phone number.

I am in the process of ordering a replacement for my 75A3 that is being restored. I haven't seen his replacement yet, so I don't know what it looks like. I've been told they look very close to the originals.

- 2) If David Knepper can't help, and no one has a junker R-388 that will part with a dial, you might try the following:

Find a piece of thin circular plastic the same diameter as the original KC dial. Glue the broken pieces onto the thin plastic circle, and mount it onto the hub, much like the original dial was mounted. If the original KC dial was broken in only two pieces, and if you can do a good job of fitting the pieces close together when you glue them onto the plastic circle, the crack may not be that noticable. The only problem is that you must find a THIN circular piece - If it's too thick, the thickness of both the circular piece and the original dial glued to it may cause it to scrape and drag slightly as you tune the receiver. It's still better than nothing, though!

Good Luck,

Dennis Gibbs
dgibbs@rational.com

From boatanchors@theporch.com Wed Jun 14 20:17:34 1995
Date: Wed, 14 Jun 1995 15:17:34 -0500
Message-Id: <199506142013.PAA11827@chuck.dallas.sgi.com>
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: Brown Bros Paddle

At HamCom I picked up a Brown Bros Iambic paddle which had been missed by some my fellow QRPers here in Dallas.

It was in good mechanical but relatively poor cosmetic shape. So stripped it down and stripped the paint. Got out the HVT black wrinkle engine spray can and went after it. Real light coat has restored the Brown Brothers Paddle to like new condition. Someone had drilled and tapped three wholes towards the front for some unknown and probably illegal use. I promptly filled them in and you wouldn't know they had every been there.

I got very very lucky in removed the Red rectangular label off the top front by using an Exacto chisel (wood) for the knife. Came off without a wrinkle. I could have been a surgeon if it wasn't for all that blood and gore. :-)

I'm looking for others to restore.

My therapy for the week.

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From boatanchors@theporch.com Wed Jun 14 20:19:17 1995
Date: Wed, 14 Jun 1995 15:19:17 -0500
Message-Id: <199506142014.PAA11831@chuck.dallas.sgi.com>
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: Brown Bros Revisited

"wholes" -- Texas Aggie spelling for holes. :-)

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From boatanchors@theporch.com Wed Jun 14 15:25:00 1995
Date: Wed, 14 Jun 1995 10:25:00 -0500
Message-Id: <SA39+evjrja@hrlban1.alhra.af.mil>
From: jmartin@hrlban1.aircrew.asu.edu
Subject: Buckwalter superhet schematic

To collectors of 20s battery sets...

I'm looking for a schematic for a Cleartone 8-tube superheterodyne, made by Buckwalter Radio around 1925. All tubes are 01A triodes. This one isn't in the Rider manuals, or Gernsback either. Can anyone help with information?

Thanks,

John Martin

From boatanchors@theporch.com Wed Jun 14 21:31:38 1995
Date: Wed, 14 Jun 1995 16:31:38 -0500
Message-Id: <9506142128.AA10260@ihurry.ih.att.com>
From: Michael.J.Knudsen@att.com
Subject: Re: Buckwalter superhet schematic

Well, yet another brand of antique superhet heard from!
I collect the beasts, and I've never seen the same make or model twice!
I have books with about 5 schematics or so between them, none of which match
the 5 or so sets I have. So rotsa ruck :-)

Good news: First, you can probably just trace the circuit with your finger --
I assume this is wired with square bus wire, parts screwed to wooden frame.

Second, there were only a few basic circuits, differing mostly in the front end.
Biggest thing is to find out whether or not you need a loop antenna, and
if so must it be center-tapped.

8 tubes is the "standard" -- call it the All-American 8 --
osc, mixer, 1st, 2nd, 3rd IF, det, preamp, audio_output.
I have a 10-tuber with FIVE IFs, try that on your R390A, but this seems to
be overkill (however, this set actually picks up stations).

Except for RCA, all superhets of the '20s were homebrewed from schematics,
kits, or semi-kits that included only the oddball critical parts. Some
included custom front panels. Some were custom-assembled by moonlighting
radio techs to sell to less technically inclined neighbors. RCA tolerated
this as long as nobody sold factory assembled units. In late '20s
RCA clamped down completely, got themselves sued under Anti-Trust, and ended
up having to license (for a fee) anyone who wanted to mfg superhets.

All of mine are 01A tube types, except for the RCAs, which use 199 tubes.
RCA did major cost engineering and got the circuit down to 8 tubes,
but a couple years later went back to 8, but that included an RF stage.
And only 2 IFs, wow!

BTW, the only brand names on my homebrew sets are the coil sets.
Other brands show up on tuning condensers and the knob drives, but
the official "name" for a set is the IF transformers.

73, mike k

From boatanchors@theporch.com Thu Jun 15 07:07:06 1995
Date: Thu, 15 Jun 1995 02:07:06 -0500

Message-Id: <Pine.LNX.3.91.950615020459.18314C-100000@gxl.woodtech.com>
From: "Frank C. Gilmore Jr." <fgilmore@gxl.woodtech.com>
Subject: Re: Bug question:

On Tue, 13 Jun 1995 Michael.J.Knudsen@att.com wrote:

> So the MO state police used CW? Between stations, I guess, not with the cars.
> Was that on HF? Was it encrypted, or sufficiently full of abbreviations,
> 10-codes, and jargon so nobody could've figured it out anyway?
>
> WOnder what other land-locked uses of HF CW there were?
> BTW, I'm too young (51) too remember AM police car calls just above
> the AM BC band. --mike k
>

Too young! I am only 54 and I used to listen to them all night when I could get away with it back in the late 40's and early 50's...actually up until about '55.

Yes the traffic was between troops, HQ to FBI, and Interpol. It was plain because it was brief, abbreviated, and very hot operators. I used to have a chart one of the ops gave me showing freqs and services but I can't find it anymore. It was a joy to listen to those nets.

Many people do not know the FBI used CW within the states quite a bit. A retired operator moved to the area and we became friends. He is a silent key now. Same with the FAA. Again, silent key....WOAH....one of the most beautiful fists I ever heard even though he wasn't a ball of fire on speed. He got the job done. He was one of the first to actually hold a license when the government decided licenses were needed. The great stories he told about his adventures with spark/banana boats/etc before getting on with the CAA, later FAA, were terrific.

73,

Frank
de K0JPJ ex-W5PVX ...--

From boatanchors@theporch.com Wed Jun 14 18:35:51 1995
Date: Wed, 14 Jun 1995 13:35:51 -0500
Message-Id: <n1408985657.79576@msmailgw1.arlut.utexas.edu>
From: "rohre" <rohre@arlut.utexas.edu>
Subject: Caution: Acetone

Although many of us played with acetone in our mispent youth; be advised it is

1. Poisonous
2. Toxic
3. A carcinogen
4. Tetra-ethyl bad stuff, as we like to say in the Fire Dept.

It would have to be used with skin, eye and nose protection; and may not be sold readily to individuals in many areas; thus it may be hard to get in small quantities.

Although the other solvents are not anything to be casual about, I think the brake fluid, which is an alcohol type product, or other paint thinners would be safer clean up after the chemical stripping process, and can be readily used on a fine steel wool pad. Be advised on a copper chassis a steel wool will change the color, while a non metal pad will get a brighter copper color. This effect is sometimes used in making Indian silver jewelry, to get a darker silver by rubbing with steel wool.

Use solvents outdoors and away from sparks, flames, pilot lights, and relays like in air conditioners, or any electrical contactor that could spark.

Safety first to enjoy that restored BA!
Stuart K5KVH

From boatanchors@theporch.com Wed Jun 14 14:11:53 1995
Date: Wed, 14 Jun 1995 09:11:53 -0500
Message-Id: <n1408997210.28483@mac-mailserver>
From: "Ferranti Rick" <ferranti_rick@atc.ll.mit.edu>
Subject: Collins Mech Filter ID

Does anyone know what the bandwidth is of the following Collins mechanical filter?

F455J 05 7V2

Any information would be helpful.

thanks

Rick Ferranti
preferred email address: remler@ll.mit.edu

From boatanchors@theporch.com Wed Jun 14 22:36:04 1995
Date: Wed, 14 Jun 1995 17:36:04 -0500
Message-Id: <9506142232.AA07466@kali>

From: Andy Wallace <wallace@mc.com>
Subject: Desk ornaments

I had a Ken-Rad 832 (VHF dual triode?) on the bench at work. Weird style, thin pins except for one locator pin, and two out the top of the tube, which is shaped like a big acorn. At my current place of employment my area has too many hi-profile tubes to leave it out ('twould be classified as "extraneous junk") but when things settle down and I get my own bench again I'll bring it in.

What would make a real attention getter is this huge 1.5' tall Jan 128A tube I have. I'd still like to know what that is, and how much power it's good for. Filament pins are 1/4" copper bar.

That "paperweight tube" on Electron Tube Enterprises catalog's back page is neat. They had one holding their flyers down at the Westford MA antique radio fest this year. But for \$20 I'll stick with this weird 832.

--Andy

From boatanchors@theporch.com Wed Jun 14 22:51:24 1995
Date: Wed, 14 Jun 1995 17:51:24 -0500
Message-Id: <199506142249.PAA13417@hobbes.UCSC.EDU>
From: haynes@cats.ucsc.edu (Jim Haynes)
Subject: Re: desk ornaments

Does anybody have a Zahl tube? It's a Signal Corps VT-158 or something like that. It was the transmitting tube for a 600 Mhz radar, and had the resonant circuit inside the bottle.

Which reminds me, the late Harold Zahl (career employee of Signal Corps Engineering Lab) published a couple of books of memoirs, "Electrons Away" and "Radar Spelled Backwards". Lots of fun to read if you can find them.

From boatanchors@theporch.com Wed Jun 14 21:20:57 1995
Date: Wed, 14 Jun 1995 16:20:57 -0500
Message-Id: <199506142118.RAA11210@lynx.dac.neu.edu>
From: Damon Z Cassell <dcassell@lynx.dac.neu.edu>
Subject: Electric Radio

I'm sure this information must have been passed through here a million times or so, but could someone please post the address of Electric Radio

so that I could write for a subscription?

Also, how frequently does ER come out (guessing monthly) and off hand, does anyone know the going subscription rate?

Thanks.

Damon Cassell, WU1T
dcassell@lynx.dac.neu.edu

From boatanchors@theporch.com Thu Jun 15 03:49:48 1995
Date: Wed, 14 Jun 1995 22:49:48 -0500
Message-Id: <950615034445_72227.1640_EHM177-1@CompuServe.COM>
From: David Stinson AB5S/7 <72227.1640@compuserve.com>
Subject: ENOUGH ALREADY!

ENOUGH ALREADY

I just received Electric Radio number 74,
and am absolutely appalled and saddened.
I thought we'd finished with all this. ER #74 contains
a large article on "modifying" Command Set receivers
for double conversion. I propose that this is not only
destructive of irreplaceable pieces of history, but that
it simply doesn't make good sense.

Suppose that you own a Ford model-T automobile
and you take it for a drive. On today's highways,
Porches and Hondas go zipping by you, honking.
You're hot, since the old highway vet has no air.
So you decide you'll "convert" your model-T to be
like a modern sports car!

What you have left after this butchery is neither
fish nor fowl. It still won't go 0-60 in 5 seconds.
The chrome pipes look pretty silly next to those
spoked wheels and the jury-rigged fanbelt
for the air keeps flying off. Your model-T
has lost its meaning. It no longer has a story.
It is a nothing. Better to have enjoyed the old
Ford for what it was -- unhurried, uncluttered...
a masterpiece of simplicity that requires
a little skill and an appreciation of the romantic.

Command Set receivers are broad and tune fast.
No question about that. They were designed that way

on purpose. Formations of hundreds of B-17s would be lucky to be within ten KCs of each other.
I have worked stations all over the west with them in their original configuration and listening to 75 meters at night does take some patience and skill. They are not Yea-Com-Woods. If I want sharp tuning, sensitivity and punch I turn on my IC-735. If I want history and romance then the filaments glow, the dynamotors whir and I am a boy again, dreaming boys dreams of flights of B-17s, when there were still noble causes to live and die for.

Only a few of these historical rigs remain undamaged by "modification." Let's keep those few so future generations can know the romance of history.

"So these flew in the war so long ago?
That's really cool, Grampa....."

Dave Stinson AB5S/7

From boatanchors@theporch.com Wed Jun 14 19:26:53 1995
Date: Wed, 14 Jun 1995 14:26:53 -0500
Message-Id: <199506141922.0AA26220@uro.theporch.com>
From: "MELUCAS, MARC P." <MELUCAS@wsmc-mis.af.mil>
Subject: Flagstaff, AZ

Gang-

Please excuse the bw, but could someone post directions to the Fort Tuthill 'fest near Flagstaff, AZ, to be held 21-23 July?? Assume to be driving in on I-40. Thanks.

Marc, KB0JPQ
MELUCAS@wsmc-mis.af.mil

From boatanchors@theporch.com Thu Jun 15 01:43:02 1995
Date: Wed, 14 Jun 1995 20:43:02 -0500
Message-Id: <Pine.3.89.9506141856.A3027-0100000@netcom5>
From: paul Veltman <veltman@netcom.com>
Subject: Re: Flagstaff, AZ

On Wed, 14 Jun 1995, MELUCAS, MARC P. wrote:

>
> Gang-
>
> Please excuse the bw, but could someone post directions to the
> Fort Tuthill 'fest near Flagstaff, AZ, to be held 21-23 July?? Assume
> to be driving in on I-40. Thanks.
>
> Marc, KB0JPQ
> MELUCAS@wsmc-mis.af.mil
>
>

Well, If it's in the same place that it was when I lived in Flag, take I-17 or Highway 89 south toward Phoenix. There was an offramp for the Coconino County Fairgrounds (Ft. Tuthill) and go in. It's been a long time, so please tell me how the hamfest is. Also, please tell me if the big steam locomotive is still there. I would be a Southwest Forrest Industries articulated.

73

Paul WA6OKQ

From boatanchors@theporch.com Wed Jun 14 14:19:05 1995
Date: Wed, 14 Jun 1995 09:19:05 -0500
Message-Id: <37014.owen@apollo.eeel.nist.gov>
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: RE: General Radio Wavemeter

In message Mon, 12 Jun 1995 11:01:25 -0500,
dmedley@indirect.com (David Medley) writes:

> Does anyone out there know anything about a General Radio Model 574
> Wavemeter. Would like to hear from anyone who can help. A friend of mine
> in Australia has found one and would like to know what he has got!! He
> says it looks quite old.
> Dave Medley
>

Dave this could be the commerical version of a Koster decremeter designed by one of the early radio engineer's (Koster) here at NIST (NBS). If it has a meter labeled decrement than that would cinch it. This unit was designed for the Radio Inspectors to check the decrement of spark transmitters.

However, this also could be a later wavemeter only, designed by GR. I would like to know more, if you can find out any other info.

James C. Owen, III

National Institute of Standards & Technology (NIST)

Bldg 225/B360

Gaithersburg, MD 20899

1-301-975-5623

From boatanchors@theporch.com Wed Jun 14 15:49:57 1995

Date: Wed, 14 Jun 1995 10:49:57 -0500

Message-Id: <Pine.OSF.3.91.950614094143.28678B-100000@alpha.pr1.k12.co.us>

From: Terry Lee Ehrlich <terrylee@pr1.k12.co.us>

Subject: RE: General Radio Wavemeter

> In message Mon, 12 Jun 1995 11:01:25 -0500,

> dmedley@indirect.com (David Medley) writes:

>

> > Does anyone out there know anything about a General Radio Model 574

> > Wavemeter. Would like to hear from anyone who can help. A friend of mine

> > in Australia has found one and would like to know what he has got!! He

> > says it looks quite old.

> > Dave Medley

> >

> Dave this could be the commerical version of a Koster decremeter designed by

> one of the early radio engineer's (Koster) here at NIST (NBS). If it has a

> meter labeled decrement than that would cinch it. This unit was designed

> for the Radio Insprectors to check the decrement of spark transmitters.

> However, this also could be a later wavemeter only, designed by GR. I would

> like to know more, if you can find out any other info.

> James C. Owen, III

> National Institute of Standards & Technology (NIST)

All,

This meter is designed in two parts as I recall.. The condenser is in a cylindrical black bakelite case with a dial on top. Two binding posts were used to attach the second part..the coils used, obviously, for the various frequencies to be tested. These coils were wound on black bakelite cylinders with rust-colored or green-colored cotton covered wire.

General Radio put out lots of these guys in the mid-to-late 1920s for the tube transmitter fad that was as popular as the receiver fad.

There were a couple of versions.. both looked about the same and did the

same job.

Rick

```
=====
      Richard T. Ammon      |      $$ BUYING OLD RADIO ANYTHING...$$
                           |      sets, parts, literature, magazines, etc
      Terry Lee Ehrlich   (StepSon) |      Particularly interested in transistor
                           |      radios with "CD" markings at 640 & 1240
      Join COLORADO RADIO COLLECTORS |      on the dial...smaller the better. Thanks!
=====
```

From boatanchors@theporch.com Wed Jun 14 19:23:18 1995
Date: Wed, 14 Jun 1995 14:23:18 -0500
Message-Id: <9506141918.AA19634@ptolemy.la.asu.edu>
From: "Kevin E. Schmidt" <w9cf@ptolemy.la.asu.edu>
Subject: RE: General Radio Wavemeter

> Does anyone out there know anything about a General Radio Model 574
> Wavemeter. Would like to hear from anyone who can help. A friend of mine
> in Australia has found one and would like to know what he has got!! He
> says it looks quite old.
> Dave Medley

The GR-574 was advertised in the September 1937 issue of the Proc.
I.R.E. so that should give a reasonable idea of its vintage. GR had a
different set of wavemeters in the mid 40s, so I doubt they were making
these by then. From the picture, it had a storage compartment for the
coils which are about 1/4 as high as their diameter. Each seems to
have its frequency dial engraved on the coil. According to the ad it
goes from 166 KHz to 70 MHz with 3 percent accuracy. It weighed
4.5 lbs., and cost \$50.00, complete, in 1937.

Kevin

=-----
Kevin Schmidt w9cf@ptolemy.la.asu.edu
Department of Physics and Astronomy
Arizona State University, Tempe, AZ 85287-1504
(602) 965-8240
(602) 965-7954 (FAX)

From boatanchors@theporch.com Wed Jun 14 21:00:06 1995

Date: Wed, 14 Jun 1995 16:00:06 -0500
Message-Id: <9506142058.AA10068@ihurry.ih.att.com>
From: Michael.J.Knudsen@att.com
Subject: RE: General Radio Wavemeter

Don't know if this is the instrument(s) you guys are discussing, but at last summer's ARCI RadioFest I owned an antique Gen Rad wavemeter for about an hour. I paid \$40 for it and later swapped it for a Radiola 60 parts set I needed to restore another.

It came in a plain, rough, wooden box with hinged lid, which held 4 coils and the tuning unit (meter, vari condenser and knob with 0-100 scale). Also in the box were calibration cards for the 4 coils.

It was well made, but not ruggedly beautiful like most instruments of that era. (I have bought various German lab instruments just for their beauty inside and out). I figured it could only be used around transmitter circuits, being a "passive grid dip meter", so was neither useful nor pretty, so I traded it off. It was in perfect shape as far as I could tell. Didn't seem to have been used much.

Hey, anyone here ever tet so desparate for a VFO that you used a grid dipper?
--mike k w9nrd

From boatanchors@theporch.com Wed Jun 14 21:17:02 1995
Date: Wed, 14 Jun 1995 16:17:02 -0500
Message-Id: <9506142114.AA10174@ihurry.ih.att.com>
From: Michael.J.Knudsen@att.com
Subject: RE: General Radio Wavemeter

Do you mean Kolster? He later engineered a good line of broadcast radios. I do recall reading that he started out with decrement meters. Have been wondering how those worked. I think they measured the damping, or the extent to which the oscillations from a single spark died out in exponential decay. This was a measure of bandwidth -- the less, the better the signal quality.

And it seems to me that would be a very hard thing to measure without an Oscope -- anyone know how a decrement meter worked? I feel a little more interested since bringing home that Tesla coil quack-zapper with its spark-transmitter excitation. --mike k

From boatanchors@theporch.com Wed Jun 14 22:46:01 1995
Date: Wed, 14 Jun 1995 17:46:01 -0500

Message-Id: <199506142242.SAA13559@cc01du.unity.ncsu.edu>
From: rdkeys@unity.ncsu.edu
Subject: Re: General Radio Wavemeter

>
> Do you mean Kolster? He later engineered a good line of broadcast radios.
> I do recall reading that he started out with decrement meters.
> Have been wondering how those worked. I think they measured the damping,
> or the extent to which the oscillations from a single spark died out
> in exponential decay. This was a measure of bandwidth -- the less,
> the better the signal quality.
>
> And it seems to me that would be a very hard thing to measure
> without an Oscope -- anyone know how a decrement meter worked?
> I feel a little more interested since bringing home that Tesla coil
> quack-zapper with its spark-transmitter excitation. --mike k
>

That sounds like one R.A. Kolster of the decrementer fame.

Basically, you have it in a nutshell.

It is a tuned calibrated output wavemeter and you are measuring the bandwidth of the emitted signal (spark -- Class B). What you do is tune across the signal in specified increments and measure the signal strength. Then it is plotted to give you a bandwidth curve. The greater the logarithmic decrement the narrower the wave peak. Good values of logarithmic decrement for ``modern'' 1917 style spark sets were in the range of 0.05 to 0.12, according to Elmer Bucher), The decrementer was actually just a wavemeter with a sensitive wattmeter readout. As such, it actually only measured the true decrement indirectly via the calibrated dials. What it actually did measure was simple field strength.

The logarithmic decrement of damping is given by:

$$M = \frac{4.605 + \gamma}{\gamma}$$

where gamma is the Naperian logarithm of the ratio of two successive oscillations in the same direction (decrement), and M is the number of complete oscillations in the wave train when the last one has attained an amplitude of 0.01 of the initial oscillation amplitude when the wave train started. What this says is that for a decrement of 0.2 one should get some 24 complete oscillations per spark, according to Bucher.

It becomes a bit more complicated than that because of coupling between the wavemeter and the spark set, but the decremeter dials were calibrated for that.

Directly coupled spark sets typically had poor decrements. (Hey Ma, read NO tuning..... (:+}}....., like my Dad's Model T Ford spark set in 1914.)

Loose coupled spark sets had better decrements (read because it had one tuned tank circuit and a more or less tuned antenna circuit), and emitted a ``purer'' signal.

A typical tuned spark set had a wave with a bandwidth of 100 meters at a 10:1 ratio of readings at a fundamental frequency of 600 meters. This is why there were only three fundamental waves for shipboard spark sets 300 meters, 450 meters, and 600 meters. That is as much antenna as could be put on a ship and as many discrete signals as could be made to fit within the band. At 30db down, it was about 350 meters wide. Ouch, no wonder spark does not meet modern rig requirements, right?

For more information see Bucher, E., 1917, Practical Wireless Telegraphy, pp 196-205.

73/Bob/NA4G

p.s. I wonder how good an emitted signal would be, and how free of harmonics it would be if a spark set were contained in a well shielded cabinet, properly bypassed, and the output run through something like a triple tuned bandpass filter, something like a series of 3 or 4 good filters and a pi-net tuner on the output side to yer average coax dipole antenna..... (:+}}..... A 1kw quenched gap set would give about 200 watts output, but after filtering might be 25 or 50 pure watts on one frequency. Lessee, on 160 meters about 1900khz about midnight in the middle of winter might be workable..... (:+}}..... Alas, it would be more like tone modulated AM and not workable below 2 meters. But, the tuned circuits would add immensely to the sharpness of tuning. Well, in the next life, right.....(:+}}.....!

From boatanchors@theporch.com Wed Jun 14 22:48:00 1995
Date: Wed, 14 Jun 1995 17:48:00 -0500
Message-Id: <199506142246.SAA13601@cc01du.unity.ncsu.edu>
From: rdkeys@unity.ncsu.edu

Subject: Re: General Radio Wavemeter and VFO funzies

>
> Hey, anyone here ever tet so desparate for a VFO that you used a grid dipper?
> --mike k w9nrd
>

Almost. I am working up a Model LM rather than a dipper, and it should actually work rather well, if enough good signal strength can be had with several tubies in between the LM and the 807 rockbound oscillator.

Ahhhhh, the stuff dreams and long winter nights are made of.....

Bob/NA4G

From boatanchors@theporch.com Wed Jun 14 23:07:33 1995
Date: Wed, 14 Jun 1995 18:07:33 -0500
Message-Id: <Pine.3.89.9506141701.A23607-01000000@indy2>
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: GR 916AL RF Bridge For Sale

Hi!

A co-worker has a General Radio 916AL RF bridge for sale. Normalized to 1MHz, this is the (old) "standard" bridge for measuring antenna impedance at AM stations. It's just as happy on the bench or in ham applications--it doesn't run at high power levels.

Well-made, very accurate; this one is in at least good condition. The outer cover is a bit worn but the inside (including the front panel, which is protected by the outer case) is in VG to excellent shape.

Includes 2 GR-to-GR connector cables. He's asking \$200. (shipping extra)

E-mail replies to me--we haven't got Dale on the 'Net *yet.* :)

73,
--Bobbi

From boatanchors@theporch.com Thu Jun 15 02:46:15 1995
Date: Wed, 14 Jun 1995 21:46:15 -0500
Message-Id: <9506150241.AA20003@ptolemy.la.asu.edu>
From: "Kevin E. Schmidt" <w9cf@ptolemy.la.asu.edu>
Subject: Re: GR 916AL RF Bridge For Sale

> From: "Roberta J. Barmore" <rbarmore@indy.net>
> A co-worker has a General Radio 916AL RF bridge for sale. Normalized
> to 1MHz, this is the (old) "standard" bridge for measuring antenna
> impedance at AM stations. It's just as happy on the bench or in ham
> applications--it doesn't run at high power levels.

All true. The L means this is a low frequency bridge. I believe it runs from 50 KHz to 5 MHz rather than the 400KHz to 60 MHz range of the 916A. Should work fine on 160 and 80 but not much higher.

Kevin

=-----
Kevin Schmidt w9cf@ptolemy.la.asu.edu
Department of Physics and Astronomy
Arizona State University, Tempe, AZ 85287-1504
(602) 965-8240
(602) 965-7954 (FAX)

From boatanchors@theporch.com Thu Jun 15 00:17:06 1995
Date: Wed, 14 Jun 1995 19:17:06 -0500
Message-Id: <199506150016.RAA14046@bud.indirect.com>
From: dmedley@indirect.com (David Medley)
Subject: GR Wavemeter

To all those who responded to my query many thanks. I have asked my friend in Australia for more information and have also sent him the comments you all made. I will post another message here when I get his response.
Dave

From boatanchors@theporch.com Wed Jun 14 14:34:36 1995
Date: Wed, 14 Jun 1995 09:34:36 -0500
Message-Id: <Pine.3.89.9506140846.B15349-0100000@indy2>
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: Ground Loop Problems

Hi!

I'm going to send this the list, since Grant's probably not the only person running old broadcast gear into a BA transmitter. There are some things to watch out for.

On Tue, 13 Jun 1995, Grant Youngman wrote:

> I am attempting to use a [...] (CBS Volumax) with a couple of BA transmitters [....]

> [...] a problem [[:...]] ground-loopy sounding hum in the audio when
> this unit is in line [...]

> The mic (D-104) feeds a small preamp which drives a 10K:600 ohm unbalanced
> to balanced transformer. The grounds of the unbalanced side and shield of
> the balanced side are tied together as part of the transformer assembly.

So far, so good. The shields and preamp-output ground should all be tied to the case/ground terminal of the limiter. (Btw, input levels for the Volumax and most similar units are fairly low, -22 to +8 dBm within adjustment range of the pot. They were designed to live at the far end of a (lossy) Telco circuit from the rest of the program chain.)

> The balanced output of this transformer feeds the Volumax. The balanced cable
> is grounded on both ends.

Bzzzt! Nope. The shield should go to earth at **one** end only. **All** shielded-pair cable should be done in this fashion, with one and only one connection. Standard practice is to connect only the device-input end of the shield, though it's not a hard and fast rule.

You may not need the transformer. Some models of the Volumax can be internally strapped for 10K, balanced or unbalanced. However, a cheap transformer serves to limit bandwidth, keeping RF out of the AF. Downside, cheap ones have rotten common-mode rejection and are susceptible to induced hum--put them in a mu-metal shield and/or keep them as far away as possible from power transformers, florescent light ballasts, etc.

> From the [...] output another length of cable feeds the 600 ohm balanced
> input of a second 600:10K ohm transformer. Cable is
> again grounded at both ends. [...] The 600:10K transformers
> are standard Radio Shack (sorry guys!) items.

Two possible problems, and one likely extra part. First, the double-connected shield no-no; second, that poor little RS iron is probably not very happy at typical pro levels (or you've got the output attenuator on the limiter 'way down) and is probably not reflecting a 600Z load to the limiter (not that it'll mind much).

Actually, the transformer's extra. You don't need it; the Volumax has one in the output already and it'll be as happy running unbalanced as not. You **might** want to strap the "-" output terminal to the ground, probably right next to it on the terminal block; or not, see Rule #4 below.

You **do** need a nice big pad. Pro limiters are usually run at +10dBm into a transmitter--max output level of the Volumax is +24, leaving us 14dB "headroom." Assuming the rig wants a -30dBm level, a nice "pi" pad would use a 612R resistor from the hot side to ground at each end, with a

30K resistor in series between the hot side of the limiter output and xmtr mic input. Good real-world values are 620R and 33K; it's not terribly critical. If it's too hot, put a bigger resistor in the series leg. If you need more level, make it smaller and bring the terminating (shunt) arms up a bit: 680R & 4.7K for -14dBm, etc.

Impedance matching? Forget it! The low source Z of the pad will do fine working into a hi-Z input. If the input cap is very small, you might want to increase it. Alternatively, you can try higher values of termination resistance on the transmitter side of the pad, though you'll want to increase the series arm a bit as well. The nice thing about high-loss 0 pads is you can get away with such tricks empirically, since the series arm is such a high value.

The pad should be located right at the mic connection if at all possible. For 1/4" jacks, you can get one of the very large ones (made to hold phone tips under the screws, btw) and build it right into it.

> I have tried bonding the Volumax directly to the transmitter chassis with
> a separate short length of braid -- the ground-loopy buzz gets louder.
> I have tried bonding the Volumax directly to the single point station
> ground -- no noticeable effect.

The Rules Of Audio Grounding:

1. "Ground," despite the good press it enjoys, should not be ranked with Motherhood and apple pie. You can trust your mother, most apple pies are good...but "ground" you must never trust. It never stays "ground" for long.

2. Each and every device gets one and only one connection to ground. Grounded devices should not have their cases connected together other than thier individual connections to ground. Not ever. (This is why I still tend to use two-prong *polarized* AC at the operating position, despite being soundly razzed for it. That "third wire" is a fine DC ground; it's a decent one at 60 cycles. After that it starts being all sorts of things, none of them nice).

3. Shields must *always* be connected at one end only. Always.

4. Rule number two is sometimes violated when working with unbalanced audio. This must be determined by the actual design of the devices interconnected and by experiment; transformers may generally be grounded at one end with impunity, active differential inputs don't mind it, but active differential outputs are better dealt with by ignoring one side of the output and connecting betwixt grund and the other side. As common-mode rejection of transformers etc. can vary, some fiddling is usually required for best results. Unbalanced high-level audio must always be interconnected with shielded twisted-pair, using one wire for the "ground" side. The *shield* must be connected per rule #3!

(Note that everybody's hi-fi installation breaks the rules. This is possible because the interconnecting leads are short, the whole thing is usually "floating" and it's not running in a strong RF field. It's also

one reason why home stereos are usually RFI nightmares, and why there's a bit of hum in most of 'em).

> Anyone have any thoughts? Should I maybe leave the shields on the balanced
> 600 ohm input and output cables floating on one end?

That's the first step, yes! In the Glorious (?) Daze of Yesteryear, many a radio station was wired up with bare-shield twisted pair, shields bonded together and to a fair "ground" buss every few feet, and we *still* fought hum. The controlled-ground approach outlined in brief above will solve nearly all ground-loop problems; it became popular during the early 1950s for that very reason, and continues in use to this day. I think I clipped the last bit of old-style wiring out of the racks at WTHR in '90 or so when we installed stereo patchbays at the transmitter.

Congratulations on picking Canare cable, btw! It's good stuff. If you've got the "star quad" version, be sure to follow the directions for hooking up the two pairs; you can wrap that stuff around the hot wire to/from a triac dimmer and not pick up buzz.

73,
--Bobbi

From boatanchors@theporch.com Wed Jun 14 21:35:54 1995
Date: Wed, 14 Jun 1995 16:35:54 -0500
Message-Id: <9506142132.AA03374@yellowjacket.West.Sun.COM>
From: tony.angerame@west.sun.com (Tony Angerame - Sun SSE)
Subject: Hallicrafters For Sale

Fellow Boatanchors, I have an SX-101 MkIII and HT-37 pair for sale. The HT-37 is very good both electrically and cosmetically with original paint. The SX-101 Mk III Has a good front panel and a good repainted cabinet. Electrically the 101 is very good but could use an alignment touch up for the higher bands. I could not bring myself to melt the wax sealing the RF coils but did an IF alignment and replaced some tubes. I'd like a local (SF Bay Area) deal and \$175 for the 101 and 125 for the HT-37\$275 for the pair u-haul. I will also throw in a homebrew Product Detector from CQ Magazine which I built but never installed.

Tony WA6LZH e-mail or (510)655-6047 (Eve)

From boatanchors@theporch.com Wed Jun 14 06:39:38 1995
Date: Wed, 14 Jun 1995 01:39:38 -0500

Message-Id: <9506140137.aa12120@lunatix.lunatix.lex.ky.us>
From: "Greg Parsons A.K.A. Rat" <gparsons@lunatix.lex.ky.us>
Subject: Heath SB-200

Hi gang,

I got a question for all of you, I have a Heathkit SB-200 sitting here and I have read the manual front to back about three times now, but it doesn't say anything about AM, do you think it would work on AM? from looking at the book I don't see why it shouldn't, but before I throw the switch I thought I would ask. I would hate to burn it up now that I have it working so well.

73,
Greg
KE4000
--

On a clear night when the wind is from the west, you can smell America burning brite upon the night.
DoD #0862 Rat NRA Life Member Home Brewer from Hell(tm)

From boatanchors@theporch.com Wed Jun 14 18:47:58 1995
Date: Wed, 14 Jun 1995 13:47:58 -0500
Message-Id: <m0sLxRy-0010e1C@spider.lloyd.com>
From: jml@spider.lloyd.com (Jim Lockwood)
Subject: Re: Heath SB-200

At 01:38 AM 6/14/95 -0500, Greg Parsons A.K.A. Rat wrote:

>Hi gang,
> I got a question for all of you, I have a Heathkit SB-200 sitting here
>and I have read the manual front to back about three times now, but it
>doesn't say anything about AM, do you think it would work on AM?

I'm posting this to the group as a whole so if my numbers are wrong, someone else can point out my error....

The bottom line is, yes, you could run AM, but the safe power output level would be so low as to not make it worth your while.

Here's how I figure it:

The two tubes in an SB-200 can, together, dissipate about 240 Watts, I believe.

The idling bias of about 90mA at a plate Voltage of 2400 consumes 216 of the available 240 Watts plate dissipation leaving 24 Watts available.

Let's assume the amplifier is 60% efficient. The extra 24 Watts will be used up if you run the amplifier at 60 Watts of RF power and for this you will get only 36 Watts RF output.

In all probability, this would be less than the power level you would be using to drive the SB-200, resulting in a net loss of signal.

If you want to use a linear with an AM transmitter, IMHO, there are two useful "tricks" to know about.

The first is to get an amplifier with a higher plate dissipation. The second, is to run a controlled carrier transmitter, like a Drake T4 that has a fairly low idling power level. Taken together you'll end up with a mighty strong signal that sounds pretty darn good. The only ones who'll turn up their noses at you are those who don't like to see a bouncing S-meter when listening to AM.

73,

Jim - km6nk

From boatanchors@theporch.com Wed Jun 14 19:29:51 1995
Date: Wed, 14 Jun 1995 14:29:51 -0500
Message-Id: <m0sLxoj-00003kC@next3.acme.ist.ucf.edu>
From: clarke@acme.ist.ucf.edu (Thomas Clarke)
Subject: Re: Heath SB-200

At 01:38 AM 6/14/95 -0500, Greg Parsons A.K.A. Rat wrote:

>Hi gang,
> I got a question for all of you, I have a Heathkit SB-200 sitting here
>and I have read the manual front to back about three times now, but it
>doesn't say anything about AM, do you think it would work on AM?

Jim - km6nk replied

>The idling bias of about 90mA at a plate Voltage of 2400 consumes 216 of the
>available 240 Watts plate dissipation leaving 24 Watts available.

>Let's assume the amplifier is 60% efficient. The extra 24 Watts will be
>used up if you run the amplifier at 60 Watts of RF power and for

this you
>will get only 36 Watts RF output.

I don't think it is that bad. The extremes are

| | | |
|-------------|------|---------------------------|
| dissipation | out | |
| 216w | 0w | |
| 240W | 360w | (assuming 60% efficiency) |

Somewhere in the middle is the happy AM medium

2hundred mumbly watts 90w carrier ouput
(you have to have a factor of four over the carrier to reproduce
peak levels).

Actually you could probably do better than that since the PEP
of the amp is considerably more than 360w. Somewhere I remember
PEP(output) /4 as the rule for AM.

Tom Clarke
KE4VFH

From boatanchors@theporch.com Wed Jun 14 05:52:31 1995
Date: Wed, 14 Jun 1995 00:52:31 -0500
Message-Id: <199506140550.AA10069@cruz.com>
From: Bill VanAlstyne <bill@cruz.com>
Subject: Re: Large Coil Needed

At 08:07 PM 6/13/95 -0500, Bob Wier wrote:

> Awhile back I was talking to an OM who
>remarked that in the distant past he'd used a paint-on type gold plating
>solution. It seemed to be a pretty effective treatment for things like
>silver plated contacts in wafer switches which would eventually tarnish and
>become intermittant/noisy.
>Does anybody know about something similar today?

Yes! Well, sort of. Antique Electronic Supply carries this brush-on system,
but not in gold -- only in brass, copper, nickel, and silver. I suppose it
must be available elsewhere, maybe in hobby shops. For contacts, the silver
plating would probably be good. A 2 oz jar of solution is \$11.50 and the
special brushes are \$1.25 each. You use a 3 to 6 volt DC source to run it.

Don't know why they don't carry gold -- maybe it's too expensive to sell well. It should work the same way, I would think. Maybe some others will comment on this.

Bill, N6FN
bill@cruz.com

From boatanchors@theporch.com Wed Jun 14 12:25:06 1995
Date: Wed, 14 Jun 1995 07:25:06 -0500
Message-Id: <9506140718.aa03811@jackatak.theporch.com>
From: Fire Bottle archive handler <firebotl@jackatak.theporch.com>
Subject: Large Coil Needed

Jack-

> I'm still gathering parts for my LAST homebrew HF linear.
I wish you the very best in your endeavor... my project was shelved long ago when time became ever so much more scarce than money! ;^)

> it will be my last, I want to do it right.
Good for you! Only real way to build such a critter. Doug Snowden is also building his Ultimate Killer Amp and may be helpful with his experiences for parts and the like.

> I need a pi-net tank coil that will handle 15 amps of RF.
Don't think I have one of those, but I do have a Gates Swinging Choke of several bazillion henrys and rated for 15KV... It weighs as much as a small adult, though far more compact... ;^)

> jackg@xetron.com Loveland, Ohio (near Cincinnati)
I'll be at the Louisville 'Fest (my son lives there) and I get to Cincy from time to time... It has been moved by TRUCK the past few time our household has moved because UPS had a weight limit! I enjoy the personal contact, so I can be talked into delivering to a pretty staggering radius! ;^) (In-laws live in Mobile, AL; niece in Kansas City; brother near Boston; daughter goes to Purdue... widen my circle and make me an offer! ;^)

--

73

Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657/#1789 -- both all mobile! ;^)
- - - BoatAnchor Mailing List Archiver/Owner - - -
firebotl@jackatak.theporch.com - "Plus ca change, plus c'est la meme chose"

From boatanchors@theporch.com Wed Jun 14 20:05:25 1995
Date: Wed, 14 Jun 1995 15:05:25 -0500
Message-Id: <Pine.SUN.3.91.950614125845.29158A-100000@world.nad.northrop.com>
From: Bill Klatskin <wklatski@world.nad.northrop.com>
Subject: Re: Mail in digest form?

I to would like to get boatanchors in digest form. When and if you find out how, would you please let me know.

Thanks
Bill AC6FV

On Tue, 13 Jun 1995 StuSanders@aol.com wrote:

> Date: Tue, 13 Jun 1995 18:05:28 -0500
> From: StuSanders@aol.com
> To: Multiple recipients of list <boatanchors@theporch.com>
> Subject: Mail in digest form?
>
> How do I get my mail in digest form to assist in processing?
> I'm on America On-line.
>

From boatanchors@theporch.com Thu Jun 15 03:39:56 1995
Date: Wed, 14 Jun 1995 22:39:56 -0500
Message-Id: <9506142232.aa16928@jackatak.theporch.com>
From: Fire Bottle archive handler <firebotl@jackatak.theporch.com>
Subject: Re: Mail in digest form?

Really and truly, I do NOT mean to sound huffy.

I have, however, had a pretty rough day...

> I to would like to get boatanchors in digest form. When and if
> you find out how, would you please let me know.

> On Tue, 13 Jun 1995 StuSanders@aol.com wrote:

> > How do I get my mail in digest form to assist in processing?
> > I'm on America On-line.

It does not matter even a WHIT where you are subscribed from. When you subscribed there was a welcome message sent that pretty well covers

how to manage your subscription, change mail parameters etc.

No doubt it didn't interest you, so you HEAVED it...

It suggests, among other things, that when in doubt ask:

listtown@jackatak.theporch.com

and keep the administrivia OFF the list.

THIS TIME ONLY:

to get the digest, send mail to

listproc@theporch.com

and in the first line of the body of your message:

set boatanchors mail digest

and end the message. That is it. NO magic, nothing that wasn't in the "Welcome" message, and no real reason to pester the captive list.

I'll have a bowl of bran in the morning, and things will get better!

;^)

--

73

Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657/#1789 -- both all mobile! ;^)

- - - BoatAnchor Mailing List Archiver/Owner - - -

| | | |
|----------------------------------|-----------------------|----------------------------------|
| Jack GF Hill | Voice: (615) 459-2636 | Ham Call: W4PPT |
| * P. O. Box 1685 | Modem: (615) 377-5980 | Bicycling and SCUBA Diving * |
| Brentwood, TN 37024 | Fax: (615) 459-0038 | Life Member - ARRL |
| * listtown@jackatak.theporch.com | | firebot1@jackatak.theporch.com * |

From boatanchors@theporch.com Wed Jun 14 16:37:31 1995

Date: Wed, 14 Jun 1995 11:37:31 -0500

Message-Id: <9506141636.AA09379@syseng1.se.melpar.esys.com>

From: pbock@melpar.esys.com (Paul H. Bock)

Subject: Military Radio items: Fair value?

Gang,

I have picked up the following military radio memorabilia and would appreciate someone providing me with some idea as to appropriate hamfest/swapfest selling prices. E-mail replies only,

please. Headsets listed below have been tested and work, mikes have *not* been tested but there is no reason to believe they don't work.

Items include the following:

N.A.F. 68304 Beam Filter, ser. # 0861, complete with rubber cord and PL-55 (standard 1/4") plug, fully functional as a selectable filter (but being passive it is a *lossy* dude!). Electrically EC, cosmetically F/GC (lotts'a dings in the paint).

CW 49503 headset, single leather-covered headband, rubber "cup" cushions, PL-54 ("shorty" 1/4" plug) on 6" cord. 'Phones are offset at right angles from the headband. F/GC

Military headset, rubber cushions, adjustable leather-covered double headband, Type R-14 earpieces, headband stamped "RS-2," PL-54 plug on short cord. FC

Military headset, large chamois cushions (VGC), double headband with snap-on canvass cover, PL-54 plug on short cord, overall GC.

Type CD-307A 65" rubber extension cable, JK-26 (mates with PL-54) one end, wire loops other end. GC

CW-19534 5' rubber extension cable, JK-26 one end and PL-55 (standard 1/4" plug) other end. VGC

CX-37AR 5' extension cable, twisted type, PL-55 each end. GC

T-17-E hand mike, cast aluminum body w/natural finish, side PTT button (marked "Shure SW-109") and hanging eye, 5-foot rubber cable terminated in PL-68 3/16" diameter 3-circuit plug. Includes CW-110/U elastic-band mouthpiece cover. Overall G/VGC, mouthpiece cover is FC (dirty, has small tear).

Lip mike, black rubber harness & 2-pin plug. EC

Lip mike black rubber harness & plug minus mike element. GC

Lip mike, olive drab rubber harness w/ear loops, 2-pin plug. GC

Lip mike 5' rubber extension cable, PL-68 3-circuit plug one end, JK-48 (mates with lip mike plug) other end. Hanging eye molded into cable assembly near the JK-48 end. EC

PTT 8' rubber cable assembly w/SW-141-V heavy-duty PTT switch, JK-

48 on 6" cord for attaching lip mike assembly, and PL-68 on far end. GC

FSN 5340-753-3744 1" wide olive drab webbing strap in box. Opened, but strap is unused (some "greening" of the metal tip). EC

E-mail replies to pbock@melpar.esys.com

73,

Paul, K4MSG

```
* * * * *
* Paul H. Bock, Jr. K4MSG Principal Systems Engineer *
* E-Systems/Melpar Div. Internet: pbock@melpar.esys.com *
* Falls Church, VA Telephone: (703) 560-5000 x2062 *
* *
* Given two waiting lines of equal length and a 50/50 *
* chance of choosing the fastest moving one, you will *
* choose the slower one 80% of the time. *
* * * * *
```

From boatanchors@theporch.com Wed Jun 14 08:55:22 1995
Date: Wed, 14 Jun 1995 03:55:22 -0500
Message-Id: <199506140853.DAA20683@zoom.bga.com>
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: No more tubes

Hah! Toobs!

A few years ago I had a one-year contract to teach at a large engineering school. There was some sniffing from the new assistant profs. on acct. I got hired at associate level and with the wrong degrees to teach computer science/computer engineering (two different depts. under two different colleges)! Some yelping about was I a hardware cat or a software cat. Anyway, I put out the fire by saying I had been around since tubes and once designed around them? New assistants all wanted to know, what's a toob?

End result was that I had a graduate seminar on how the world looked to a toob circuit designer. Unfortunately, no suitable texts were available in print, so the course got a lot of handouts. Turned out that the library had discarded most of the old texts as well.

I was a bit amused to be teaching the reverse of a commercial course I taught in the 1958-65 period on how to design around transistors for toob types. Fortunately, I was able to round up a Tek 570 as a teaching prop, and reversed the old transistor course syllabus. Lots of questions about howcome a pentode has three "bases" and what did they all do? Had a hell of a time getting across that a 6SK7 was not a 1930's TTL-equivalent even though all three grids have transconductance. You should have seen them struggling to understand the mysteries of the infamous All-American Five. I could have used an S-38 profitably. Some of them had to work overtime to figure out how a Hartley-connected 12SA7 could actually oscillate and mix at the same time. Lots of searching for the phase-locked loop that they were sure ****had**** to be in the local oscillator. More exciting times when it came to working problems on paper without resorting to CAD simulation and predicting the results. I think about half the class learned that Ohm's Law can be worked with paper and pencil.

Probably should have insisted that they use slide rules for calculations, but the bookstore didn't have any, and I guess they're as out-of-print as the old texts. The only ones I could find were the circular jobs sold as "computers" for pilots to figure airplane problems on.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Wed Jun 14 10:34:38 1995
Date: Wed, 14 Jun 1995 05:34:38 -0500
Message-Id: <Pine.3.89.9506140557.A14047-0100000@indy2>
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: No more tubes

Hi!

There ***are*** still a few tubes out there, they're just not (save the ubiquitous CRT) in consumer gear!

Someone already mentioned the travelling-wave tubes used at UHF and up. They're not just in orbit! Our satellite uplink truck at WTHR uses a pair of TWTAs, very similar to the long-life version in satellites. If they'll take being lanched into Clarke orbit, they'll do very well in a big truck--at least as long as you turn the filaments off and let them cool

down before driving away. They are also used in some smallish UHF TV transmitters. (And they work by pure black magic, or really clever physics, which is the same thing with better numbers).

Many VHF television and radio (FM broadcast) and some UHF TV transmitters still use ceramic tetrodes and/or pentodes in the power amplifier. And high power UHF rigs use klystrons or close cousins to them. They're not cheap--the 4CX24,000A/8916s in the big rig at work are back up to US\$7000.00 again and klystrons start at about five times as much!

Better enjoy them while you can, though. I took a tour of shiny new transmitter site one of our competitors just put in: a 60kW transmitter without a single tube, just dozens and dozens of power FETs. Even the lighted push-button switches use LEDs! Their transmitter tech has brought over a pair of big mercury vapor rectifiers from the old site and set them atop the new rig; he said the site was too cold without them, and I don't think it was the HVAC system he was talking about.

We may see tubes linger a bit longer at the FM and UHF stations; it's still cheaper to build a 50kW Class C VHF amp with tubes, and there's nothing so far that'll replace the klystron affordably. With that killer price-tag, the latter can't be too far away....

I was amused by the student speculation that a 6V6 might be "some kind of fuse:" when transistors were still middling new, we called *them* "three-legged fuses!"

73,

--Bobbi

(D'ye think Arlo Guthrie would write us up a folk song for the last of the big tube rigs? Or at least revamp the lyrics of an old one? I can hear it now: "Tunin' up the TT50FH/mind the bandwidth, that cap is gettin' hot./Drawin' four Amps and only gettin' 60/Percent out and the sync is lookin' sick..." Maybe not--kind of a limited audience for it).

From boatanchors@theporch.com Wed Jun 14 13:37:30 1995

Date: Wed, 14 Jun 1995 08:37:30 -0500

Message-Id: <m0sLrp0-00003kC@next3.acme.ist.ucf.edu>

From: clarke@acme.ist.ucf.edu (Thomas Clarke)

Subject: Re: No more tubes

A while back I was at the drugstore checking the tubes from my grandmother's TV when a little kid walks up to me and asks: "What kind of video game is that, mister?"

Tom Clarke

KE4VFH

From boatanchors@theporch.com Wed Jun 14 14:02:53 1995
Date: Wed, 14 Jun 1995 09:02:53 -0500
Message-Id: <36055.owen@apollo.eeel.nist.gov>
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: Re: No more tubes

In message Wed, 14 Jun 1995 08:37:34 -0500,
clarke@acme.ist.ucf.edu (Thomas Clarke) writes:

> A while back I was at the drugstore checking the tubes from my
> grandmother's TV when a little kid walks up to me and asks:
> "What kind of video game is that, mister?"
>
> Tom Clarke
> KE4VFH
>

What drugstore's still have Tube Testers????? I haven't seen one in years.
James C. Owen, III
National Institute of Standards & Technology (NIST)
Bldg 225/B360
Gaithersburg, MD 20899
1-301-975-5623

From boatanchors@theporch.com Wed Jun 14 14:14:40 1995
Date: Wed, 14 Jun 1995 09:14:40 -0500
Message-Id: <m0sLsua-00003kC@next3.acme.ist.ucf.edu>
From: clarke@acme.ist.ucf.edu (Thomas Clarke)
Subject: Re: No more tubes

> A while back I was at the drugstore checking the tubes from my
> grandmother's TV when a little kid walks up to me and asks:
> "What kind of video game is that, mister?"

>What drugstore's still have Tube Testers????? I haven't seen one in
>years.

Like I said, it was a while back.
There was a brief overlap between the first Asteroids/PacMan video
games and tube testers in drug stores.

Tom Clarke
KE4VFH

From boatanchors@theporch.com Wed Jun 14 14:33:12 1995
Date: Wed, 14 Jun 1995 09:33:12 -0500
Message-Id: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>
From: William_Sievers-LWS005@email.mot.com
Subject: RE: No more tubes

It's amazing how fast the public forgets sometimes.

I have an old 807 (not the liquid kind either) on my desk at work next to my computer. When some of the "younger" generation see it, they are truly amazed as to what it is. I tell them it's the latest in technology and they believe it!

It's sort of neat to be on a bridge so to speak between the old technology that we grew up with and work with the very latest cutting-edge technology everyday as well.

Bill
Via Long Path

From boatanchors@theporch.com Wed Jun 14 15:54:02 1995
Date: Wed, 14 Jun 1995 10:54:02 -0500
Message-Id: <9506141554.AA72934@acs6.acs.ucalgary.ca>
From: "Deane D McIntyre" <dmcintyr@acs.ucalgary.ca>
Subject: Re: No more tubes

In message <Pine.3.89.9506140557.A14047-0100000@indy2> writes:

>
> Hi!
>
> There *are* still a few tubes out there, they're just not (save the
> ubiquitous CRT) in consumer gear!
>
> (Much good stuff regarding TWT's and toobs in broadcast rigs deleted)
> 73,
> --Bobbi

Don't forget the toob that lives in most kitchens, i.e. the magnetron tube found in all microwave ovens. Aside from CRT's likely the only

vacuum tube to be found in the average household today.

Just *when* did vacuum tubes disappear from other consumer electronics? The All-American five lasted until the mid-to-late 60's as did the record player with high output ceramic cartridge and single 50EH5 pentode. However, B&W (and colour?) TV's used tubes in some cases in the mid 70's if not later.

I think it is time that I give my nephews a talk about toobs- hope it goes over better than my introduction to ham radio last year. I used a beach-sand filled 2 M HT to demonstrate, they were *sure* that it was a CB.....of course I should have used a BA...

73, Deane D McIntyre VE6BP0
dmcintyr@acs.ucalgary.ca

From boatanchors@theporch.com Wed Jun 14 16:18:56 1995
Date: Wed, 14 Jun 1995 11:18:56 -0500
Message-Id: <"d0aX.,M0000000000*"@MHS>
From: RICHARD_HUMPHREY@hp5200.desk.hp.com
Subject: RE: no more tubes

I keep a 25L6GT tube on my desk at work. Made a little oak stand for it. Right now it's sitting on top of my PC. The neat thing about it is that it's branded with 'IBM'. I tell people I've been in computers a long time! A few people around here know what it is, although they generally want confirmation that it really is a tube.

Next to it sits my overheated power resistor. It was one of those ceramic tube style resistors with the shiny brown glaze over the resistance wire. Due to a cooling failure, it got hot enough to reflow the ceramic glaze which is now oozed around one end. It was in a shiny steel box which reflected the heat back in. Same principle as those evil shiny steel tube shields. How hot does that ceramic glaze have to get to make it flow?????

Richard
N6NAE

From boatanchors@theporch.com Wed Jun 14 16:50:41 1995
Date: Wed, 14 Jun 1995 11:50:41 -0500

Message-Id: <9506141649.AA08312@ihurry.ih.att.com>
From: Michael.J.Knudsen@att.com
Subject: Re: No more tubes

What about the AM powerhouses, 50 KW from 540 - 1700?
Would they have gone to dozens of power FETs by now?

As for folk/blues songs, best bet would be to recycle some of the
'lventy-leven zillion songs about steam locomotives, which like tubes
were replaced by something a lot less exciting.

Although I hope the "wrecks" in xmtr shacks were a bit less spectacular...
but I'd bet there are some good stories. Bobbi? mike k

From boatanchors@theporch.com Wed Jun 14 17:17:57 1995
Date: Wed, 14 Jun 1995 12:17:57 -0500
Message-Id: <199506141716.NAA21630@cc01du.unity.ncsu.edu>
From: rdkeys@unity.ncsu.edu
Subject: Re: No more tubes

>
> Probably should have insisted that they use slide rules for
> calculations, but the bookstore didn't have any, and I guess they're as
> out-of-print as the old texts. The only ones I could find were the
> circular jobs sold as "computers" for pilots to figure airplane
> problems on.
> --
> *****
> Hank van Cleef vancleef@bga.com vancleef@tmn.com
> *****

I still have and occasionally use two circulars and three
linear slip-sticks.

For the fun of it, when I took my commercial exams last year,
I used a slip-stick (given to me by W4JG who used it for HIS
exams back in 1920!). You should have seen the funny looks
and chuckles it drew from the HP programmable calculator types.
The patent dates on it were about 1899 and 1901 or thereabouts
and it is made of genuine bamboo and real honest-to-gosh ivory!
It had the usual scales except for log-log. Aside from some
yellowing of the ivory with age, it really worked great!
It still did the trick at 75 years of age..... (:+{}.....
How many hand calculators do you expect to be functional at
75 years of age!

Cudn't resist this one..... (:+{}.....!

Yeah for Boatanchor non-consumptive radio calculating devices!

73/Bob/NA4G

..... now back to work.....(:+{}....

From boatanchors@theporch.com Wed Jun 14 17:20:24 1995
Date: Wed, 14 Jun 1995 12:20:24 -0500
Message-Id: <199506141719.MAA00536@cushy.eecs.nwu.edu>
From: Norm Flasch <flasch@cushy.eecs.nwu.edu>
Subject: no more tubes

I am looking at one right now as I type this! Don't forget that
glow behind your CRT... That is, unless you are using a LCD.

--

Norm Flasch flasch@eecs.nwu.edu Northwestern University
Electrical Engineering and Computer Science

From boatanchors@theporch.com Wed Jun 14 17:45:30 1995
Date: Wed, 14 Jun 1995 12:45:30 -0500
Message-Id: <199506141753.AA29612@elvis.b11.ingr.com>
From: dlkerl@elvis.b11.ingr.com (Dan Kerl)
Subject: Re: No more tubes

Deane D McIntyre VE6BP0 (dmcintyr@acs.ucalgary.ca) sez...

>
> Just *when* did vacuum tubes disappear from other consumer electronics?
> The All-American five lasted until the mid-to-late 60's as did the
> record player with high output ceramic cartridge and single 50EH5
> pentode. However, B&W (and colour?) TV's used tubes in some cases
> in the mid 70's if not later.
>

I recently picked up an FM-AM tube table radio, a Star-Lite model FE-876
"Empress" unit in attractive, stylish ivory and brown molded plastic.
It was made in Japan and cost all of three bucks. This radio is like an
All American 5, except the usual 35W4 rectifier had been replaced with a
'silicone' (sic) diode. The available series string filament voltage is
then used to light up two 12DT8 dual triodes in the FM front end, plus
an additional 12BA6 for FM IF (a total of 36 V). The rest of the tubes
are the usual 12BE6, 12BA6, 12AV6 and 50C5. The inspection date stamp on

the bottom of the unit says 30-July-1977, considerably later than the late '60s.

When I first plugged this radio in, it hummed loudly and smoked. Upon inspection, I found that the 'silicone' diode was shorted. Replacement resulted in a working unit, and after scrubbing the nicotine off the case and replacing a few degraded carbon-composition resistors, it sits in my office, even now spewing forth vitriol. Imagine that - all those 'old-fashioned' tubes in there that could've failed and it ended up that the only semiconductor in the radio was what actually barfed. A spiritual victory of sorts.

Dan Kerl
dlkerl@ingr.com

From boatanchors@theporch.com Wed Jun 14 17:47:24 1995
Date: Wed, 14 Jun 1995 12:47:24 -0500
Message-Id: <Pine.3.89.9506141221.B18201-01000000@indy2>
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: No more tubes

Hi!

On Wed, 14 Jun 1995 Michael.J.Knudsen@att.com wrote:
> What about the AM powerhouses, 50 KW from 540 - 1700?
> Would they have gone to dozens of power FETs by now?

Yep, well in advance of us vidiots--Nautel makes the best AM rigs, but Harris and several other outfits make nice ones as well. The very first solid-state rigs were AM/MWBC; Harris's MW-1 is the most popular and may have been the very first. It's bipolar transistors rather than FETs, with an old-time ham trick to keep track of RF output from all of the modules: series pilot lamps! Don't remember if they were in the B+ or the RF line.

Nautel's 50kW rig fits in 2 or 3 racks; the 5kW transmitter took up less than a yard of one rack if I remember.

Other folks have pointed out the *other* tube in most homes will be found in the kitchen, warming up snacks. I don't know why I missed the magnetron, having once worked on test gear in a factory that built the controllers for the ovens. (Amana RR-9s with the touchscreen control, indestructable!)

Yet others reminded me that *SW* broadcasters still need megawatts, and tubes are still common there. Give it time--if you can do 60kW at VHF in a 12'x4'x5' space, and you can, tubeless SW isn't too far off. Still, there's a lot of big SW rigs around and those folks still think about

tubes, as witness the very good monograph on extending high-power transmitting tube life I got at work last month, written by a VOA engineer. (Run the filaments low and never turn them off, he says). At present, there aren't any solid-state high power SWBC transmitters on the market, so we may have another ten years there.

> As for folk/blues songs, best bet would be to recycle some of the
> 'lventy-leven zillion songs about steam locomotives, [....]

If "City Of New Orleans" counts (not steam but one of the last non-Amtrack passenger trains other than commuter runs), that's the tune for the verse in my article. :)

> Although I hope the "wrecks" in xmtr shacks were a bit less spectacular...
> but I'd bet there are some good stories. Bobbi?

Like I'm not *already* on Jack's list of the ten worst bandwidth-hogs? Ummm, one of these days. I sent off a note recently to a guy about The Day It Rained Indoors here at the transmitter, which the BA gang might find amusing. Falling ice can be a *real* problem, especially at the base of a 1000' tower!

Most broadcast transmitter crashes are fairly dull, a lot of taking-apart and reassembly, punctuated by the "clunk!" of overloads tripping.

Some of the worst happen without witnesses--a few years ago at a local SWBC station, one of the transmitter ops showed up for his shift to find the previous op slumped inside the rig, dead. It's an autotune rig--possibly something hung up and he popped open the door and reached right in without poking around with the grounding-stick first, but we'll never know. The interlocks should have made it reasonably safe but it's possible to hold 'em open with one hand.

On the other hand, a frequent cause of minor "outages" (usually just a frying-bacon sound in the air monitor and on everybody's radio) at WLBC was caused by flies wandering into the ballgap at the base of the tower. They'd get stuck and expire but not fall out and we'd have to go out to the tower with a broom and brush them out. A wooden broomstick was enough insulation--the station only ran a kilowatt.

73,
--Bobbi

From boatanchors@theporch.com Wed Jun 14 17:55:13 1995
Date: Wed, 14 Jun 1995 12:55:13 -0500
Message-Id: <199506141749.MAA03764@is.rice.edu>

From: linscot@is.rice.edu (Steve Linscott)
Subject: RE: no more tubes

You wrote:

>I keep a 25L6GT tube on my desk at work. Made a little oak stand
>for it. Right now it's sitting on top of my PC. The neat thing
>about it is that it's branded with 'IBM'. I tell people I've
>been in computers a long time! A few people around here know
>what it is, although they generally want confirmation that it
>really is a tube.
>

That brings back memories! I used to be an IBM CE, and 25L6's were used
in the 024 and 026 keypunches to pick relays. I still have a few tools
from my original (1951) tool bag, but alas, no more tubes. Well, there
might still be a 6211 in the junkbox, but that was from a 705 computer.

- Steve -

```
*****
*   Steve Linscott           Divisional Consultant - Natural Sciences   *
*   IS User Services         Rice University           Houston, Texas   *
*****
```

From boatanchors@theporch.com Wed Jun 14 20:43:22 1995
Date: Wed, 14 Jun 1995 15:43:22 -0500
Message-Id: <Chameleon.4.01.2.950614131038.jproc@>
From: jproc@worldlinux.com
Subject: Re: No more tubes

>A while back I was at the drugstore checking the tubes from my
>grandmother's TV when a little kid walks up to me and asks:
>"What kind of video game is that, mister?"

Tom,

How far back was 'a while back'. I haven't seen one of these drug store
dinosaurs since the 1960's and your mention of one of these brings back a lot
of memories when I was first learning how to fix my parents TV (and helping to
put the serviceman out of business). If this was a recent event, I'm still
surprised that your grandmother still has a working tube TV. All of the tube

TV's that I have ever used/had always succumbed to tuner wearout, a weak picture tube or a combination of these within 10 years if used on a daily basis. Wax impregnated capacitors didn't help either. Currently, I own a solid state Electrohome 19" colour TV which has been in continuous daily use for 15 years and it's still going strong.

Wonder how much a tube TV would cost in today's dollars assuming that solid state didn't happen. In 1955, my father bought a Sears Silvertone for \$Cdn295. (At that time the Canadian and US dollars were near par). Back then, he was making \$1/hr so he had to work 295 hours to pay for it. I estimate that with inflation factored in, a 21" B&W tube TV with mechanical tuner would likely cost \$2500-\$3000 if it were still built today. That's a lot of dough!

I wonder if anyone is into Boatanchor TV's?

Regards,

Jerry Proc, VE3FAB
Radio Restoration Volunteer
HMCS Haida
E-mail: jproc@worldlinx.com
Toronto, Ontario

From boatanchors@theporch.com Wed Jun 14 21:40:26 1995
Date: Wed, 14 Jun 1995 16:40:26 -0500
Message-Id: <9506142138.AA10313@ihurry.ih.att.com>
From: Michael.J.Knudsen@att.com
Subject: Re: No more tubes

Let's see. I saw a brand new Panasonic color TV in '67 that was 100% tubes (yes, Japan was settled before transistors took over :-). And I had a Philco 1971 color set that was a true marvel of hybridization -- 40 transistors, 2 14-pin DIP ICs, and 6 tubes! Tubes were the high-power outputs. Great set.

Just when it got hard to walk into a store and buy a tube AM/FM table radio, I dunno. My wife had a Panasonic AM/FM table radio that looked like a tube but was all transistors, by late '60s.

Then there was my Knight TR106 6-mtr AM xcvr, '67, all tubes except for the big Delcos in the DC-AC inverter for mobile use.

--mike k

From boatanchors@theporch.com Wed Jun 14 22:43:57 1995
Date: Wed, 14 Jun 1995 17:43:57 -0500
Message-Id: <Chameleon.4.00.4.950614174119.grant@nq5t.gtetel.com>
From: Grant Youngman <gyoungma@gtetel.com>
Subject: Re: No more tubes

> (D'ye think Arlo Guthrie would write us up a folk song for the last
> of the big tube rigs? Or at least revamp the lyrics of an old one? I
> can hear it now: "Tunin' up the TT50FH/mind the bandwidth, that cap is
> gettin' hot./Drawin' four Amps and only gettin' 60/Percent out and the
> sync is lookin' sick..." Maybe not--kind of a limited audience for it).
>

I think some Arlo Guthrie lyrics to the tune of Alice's Restaurant
would be absolutely appropriate ...!!

Grant/NQ5T

From boatanchors@theporch.com Thu Jun 15 01:22:30 1995
Date: Wed, 14 Jun 1995 20:22:30 -0500
Message-Id: <F6EK1832.F6EK1842@mail.admin.wisc.edu>
From: TOM.A.ADAMS@mail.admin.wisc.edu
Subject: Re: No more tubes

to: boatanchors@theporch.com

A few years ago the YL was going back to school to get her degree in programming. In one course, the instructor gave a brief overview of early computer technology, and when he got to ENIAC, he mentioned the "gee whiz" figures on it; size, weight, and the number of tubes.

Yep, that got the same reaction from a bunch of college kids; "What's a tube?". Anne, having resided with a ham for more years than she'd like to think about, knew very well what a tube is.

The lecture continued. I think somewhere around the IBM-706, the "gee whiz" info turned to numbers of discreet transistors. Rather amazingly, these kids had a vague idea what a transistor is ("there's a whole sh.tload of 'em in those chips!"), but when the word "discreet" was thrown in, they had no frame of reference anymore.

For the following night's class, Anne went in armed with (A) a plug-in computer board that had two 12AT7's sticking out of the top, and (B) a plug-in transistor card pulled out of the shack trash can (I'd stripped a crystal off it and dumped the rest). A label I added to it had an arrow and the words THIS IS A DISCREET TRANSISTOR.

These items were passed from student to student and examined with great interest; in fact, at the end of a 55 minute class the two items hadn't made a full circuit of the classroom, and a few students gathered around Anne's desk afterwards to get a good look.

Afterwards, the instructor asked for, and was given, the two boards as demo models for future classes. He also asked if she could get more tubes. The following week he got a box of assorted ones, including a dead 4-125A.

Re. tubes in broadcast: Bobbi's right, there are still quite a few broadcast rigs that have at least a tube PA, if not tube driver(s). I'd say that in all probability the MAJORITY of rigs still use tubes.

Even tho high power solid state amplifiers are available for C and Ku band satellite uplinks (the trend in the satellites themselves is toward these amplifiers), I'd guess that at least half of the full blown, high power uplinks in use now (fixed and mobile) still use traveling wave tube amps (I'm not including the numerous low power, narrow band VSAT units in this estimation).

Tom, K9TA

From boatanchors@theporch.com Thu Jun 15 02:44:19 1995
Date: Wed, 14 Jun 1995 21:44:19 -0500
Message-Id: <9506142135.aa16229@jackatak.theporch.com>
From: Fire Bottle archive handler <firebotl@jackatak.theporch.com>
Subject: Re: No more tubes

Apologies to the serious folks here, but I can't help it. It's been a bugger of a day, and I see soemthing that needs to be set straight!

Bobbi speculates:

> (D'ye think Arlo Guthrie would write us up a folk song for the last
> of the big tube rigs? Or at least revamp the lyrics of an old one?
[...lyric laid to rest...]

Just to keep us honest, City of New Orleans, whose "meter" it seems you were working, may have been *popularized* by Arlo, but the writers were:

John Denver
Bill and Tammy Danoff

NOT Arlo... ;^)

--

73

Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657/#1789 -- both all mobile! ;^)
- - - BoatAnchor Mailing List Archiver/Owner - - -
firebot1@jackatak.theporch.com - "Plus ca change, plus c'est la meme chose"

From boatanchors@theporch.com Wed Jun 14 17:52:49 1995
Date: Wed, 14 Jun 1995 12:52:49 -0500
Message-Id: <199506141750.NAA13533@altair.cs.unc.edu>
From: Nick England <nick@cs.unc.edu>
Subject: no more tubes ?

A promising technology for flat-panel displays are Field Emission Devices.

You use IC fabrication technology to create a really really tiny pointed conductor at each pixel (actually lots of 'em per pixel). Also create a surrounding nearby electrode. Finally, sandwich this with a cover with phosphors painted on it. Apply a little voltage between the the little pointy things and the phosphors. The little pointy things emit electrons without being heated (because the electric field intensity at a little pointy thing is quite high). These electrons can be controlled by that nearby electrode and flow over to the phosphor thingie and make colors. Did I mention that there is a vacuum between the pointy thingie and the phosphor thingie? Does all this ring a bell with you BA fans ?

There you go - your future TV set or computer display might have MILLIONS of triodes (albeit with unheated cathodes).

Nick KD4CPL nick@cs.unc.edu

From boatanchors@theporch.com Wed Jun 14 16:34:18 1995
Date: Wed, 14 Jun 1995 11:34:18 -0500
Message-Id: <199506141632.LAA00472@cushy.eecs.nwu.edu>
From: Norm Flasch <flasch@cushy.eecs.nwu.edu>
Subject: Re: No More Tubes...

>
> I also got a free copy of Glass Audio. Interesting ads, and less religion and
voodoo
> than might have been expected. One ad, by a company importing glowfest from
> RUssia, did make a startling historical claim: That Russia and Red CHina "never"
> made the transition to solid-state, adn that all the great Soviet space missions
> were done on tube technology. "Consequently the RUssians remain the masters of
> tube mfgr'ing."

>
I was in the then Soviet Union in 1987 on a youth exchange (great
experience... I could write volumes here). We stayed in (then) Lenengrad
and Moscow. We were in their best hotels. The big one that the Finns
built in Lenengrad (forgot the name) and the Rosia in Moscow. Both
rooms had tube type color tv's. Neither worked. I did not ask anyone
else if their sets worked. I was too fascinated by everything else.
In those days, a mother could safely leave her child in a stroller
outside while she shopped inside. Things have changed quite a bit since
then. We were told well in advance that everything was bugged. We had great
fun talking to those bugs! We were also on Moscow TV during our visit.

I remember what an absolute relief it was to return to Finland (what a
contrast) and then to the US. We really do have it good in this country.

I'm glad the Russians are still making tubes. I purchased my first
four recently. Have not had a chance to try them out yet.

--

Norm Flasch flasch@eecs.nwu.edu Northwestern University
Electrical Engineering and Computer Science

From boatanchors@theporch.com Thu Jun 15 00:54:43 1995
Date: Wed, 14 Jun 1995 19:54:43 -0500
Message-Id: <74904.ddillman@igc.apc.org>
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: Old BA Haunts

I see that while I was away there have been several exchanges about old
radio surplus stores. At the risk of starting yet another flurry, may I
whisper the words "Cortlandt Street"?

In the 50s when men were men and amateur exams were given at the FCC
office, we radio-oriented teenagers would journey into The City (New York
to the rest of you), there to tremble under the stern gaze of the Engineer
in Charge of the district, who dwelt within the marble halls of the federal
building. After passing our exams (or not) we would stroll down Cortlandt

Street, there to gaze in wonder at the piles upon piles of equipment. Ah, to be able to turn back the clock!

Someone in a previous mentioned the smell of these places. It was of course a heavenly scent. If someone bottles a perfume derived from 40s vintage radio fungicide, radio wackos of a certain age will be as putty in the hands of any female who wears it. Well, I will anyway. Even today I occasionally open the bottom of one of my BC-611s for a little... sniff.

Dick Dillman
"If I Can Lift It I'm Not Interested"
<ddillman@igc.apc.org>

From boatanchors@theporch.com Thu Jun 15 05:55:03 1995
Date: Thu, 15 Jun 1995 00:55:03 -0500
Message-Id: <Pine.3.89.9506142205.A217-0100000@netcom12>
From: "Hal R. Waite" <halwaite@netcom.com>
Subject: Old Radio Books for Sale

The following books are duplicates in my collection:

The Radio Handbook 9th. Edition 1942 Editors and Engineers
Good condition, some wear and slight water damage on back cover
\$9.50

The Radio Handbook 12th. Edition 1949 Editors and Engineers
Excellent condition, very little wear
\$14.50

Modern Radio Servicing 1935 First Edition Alfred Ghirardi
Good condition, some wear on the cover in the spine area
\$13.50

Radio Amateurs Handbook 1961 American Radio Relay League
Fair to good condition, nicely repaired pages joining the spine
\$8.50

Fundamentals of Radio and Electronics 1942, 1958 Modern Asia Editions
Excellent condition with worn dust jacket
\$7.50

Shipping would be \$2.00 per book.

BTW: Are there any other collectors of older radio books on the list server, especially of the 30's and early 40's? I have some other items

for trade.

Thanks in advance. Hal K4GFI/7 Las Vegas halwaite@netcom.com

From boatanchors@theporch.com Wed Jun 14 23:23:56 1995
Date: Wed, 14 Jun 1995 18:23:56 -0500
Message-Id: <memo.965664@cix.compulink.co.uk>
From: oddjob@cix.compulink.co.uk (Stephen Walters)
Subject: old radio collecting

I have just acquired a a Trans Oceanic s/n B245904, age unknown....

any idea or it's vintage....
regards

Steve>

>I have managed to resist the old radio collecting but for a while, but
> then...
> >I have the chance (?) to buy a Zenith Transoceanic for \$110. Question
> is,
> >is this a good price?

oddjob@cix.compulink.co.uk

From boatanchors@theporch.com Wed Jun 14 12:38:18 1995
Date: Wed, 14 Jun 1995 07:38:18 -0500
Message-Id: <Pine.BSI.3.91.950614082516.8404A-100000@laurel.us.net>
From: Tony Stalls <ras@us.net>
Subject: Re: paint stripping

On Tue, 13 Jun 1995, John Martin wrote:

> My experience, related to restoration of old cars, probably
> applies to paint stripping on radio gear also. After the
> majority of the paint has been removed using a 'goop' type
> liquid and a blunt scraper, I would recommend using 000 or 0000
> (very fine or extremely fine) steel wool dipped in lacquer
> thinner (available at hardware stores in the varnish area) to

> clean up any persistent areas. Brake fluid (DOT-3) probably
> would work equally well. I don't know of any conventional
> paints which will resist either of these solvents for long.

I've had good success with the "goop-type" stripper too, followed with no coarser than 000 steel wool, but I suggest using a wood scraper made from a piece of lattice. The metal ones can easily make scratches on aluminum cabinets.

Also, I have enjoyed great success using acetone rather than lacquer thinner or brake fluid and it'll totally evaporate. In fact, with a little work, acetone will strip off paint by itself. However, be sure to use acetone in very well ventilated areas.

> Bear in mind that plastic parts (i.e. dial windows, trim
> pieces, etc.) may be ruined if these solvents touch them, so
> they must be removed beforehand.

Absolutely!!!

73,

Tony
K4KY0

<ras@us.net>

From boatanchors@theporch.com Wed Jun 14 13:26:40 1995
Date: Wed, 14 Jun 1995 08:26:40 -0500
Message-Id: <Pine.3.89.9506140853.A15349-0100000@indy2>
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: paint stripping

Hi!

On Wed, 14 Jun 1995, Tony Stalls wrote:

> [...] I suggest using a wood scraper made from a piece of lattice. The
> metal ones can easily make scratches on aluminum cabinets.

Another method is to use a plastic spatula of the sort made for Teflon/Silverstone pans. Most of them don't melt (much!) in paint-stripper or brake fluid, though they might not get along with raw

acetone. The handle and tapered edge make them easier to use.

...Anyone who hasn't worked with acetone before should bear in mind a nice plume of vapor from it will "flash" at the least spark; I once foolishly tried to use some to get a fire started (hey, at least I didn't play with gunpowder! <grin>) and it took awhile for my eyebrows and bangs to grow back.... Darned stuff took off when I clicked the lighter, a couple of feet away from the would-be fire.

73,
--Bobbi

From boatanchors@theporch.com Wed Jun 14 15:51:18 1995
Date: Wed, 14 Jun 1995 10:51:18 -0500
Message-Id: <Pine.BSI.3.91.950614113744.6205A-100000@laurel.us.net>
From: Tony Stalls <ras@us.net>
Subject: Re: paint stripping

On Wed, 14 Jun 1995, Roberta J. Barmore wrote:

> On Wed, 14 Jun 1995, Tony Stalls wrote:
> > [...] I suggest using a wood scraper made from a piece of lattice. The
> > metal ones can easily make scratches on aluminum cabinets.
>
> Another method is to use a plastic spatula of the sort made for
> Teflon/Silverstone pans. Most of them don't melt (much!) in
> paint-stripper or brake fluid, though they might not get along with raw
> acetone. The handle and tapered edge make them easier to use.

I'm about to strip my R-390 cabinet. I'll get one and let you know how it works with acetone.

> ...Anyone who hasn't worked with acetone before should bear in mind a
> nice plume of vapor from it will "flash" at the least spark;

VERY good point!

> I once foolishly tried to use some to get a fire started (hey, at
> least I didn't play with gunpowder! <grin>) and it took awhile for
> my eyebrows and bangs to grow back.... Darned stuff took off when
> I clicked the lighter, a couple of feet away from the would-be fire.

Glad it was only your eyebrows and bangs! It could have been much worse!

I guess we'll have to call you Bobbi-B-Q now. ;^) (Sorry... Couldn't

resist.)

73,
Tony
K4KY0

From boatanchors@theporch.com Wed Jun 14 10:04:22 1995
Date: Wed, 14 Jun 1995 05:04:22 -0500
Message-Id: <199506141001.FAA22385@zoom.bga.com>
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: Q-meter Worth

As Thomas Clarke said

>
> The university here is having a surplus auction and one
> of the items is a Boonton (Boyton?) 260a Q-meter.
>
> What is one of these things worth? I have seen it and it
> looks to be in good shape, and I thought about liberating it
> but my lab space here at the U is pretty full already.

Well, if you are going to do any serious coil work, a Q-meter is about as basic as a VOM, and it'll do a lot of things that a grid dip won't. Boonton stuff is built like Chartres Cathedral, and the only substitutes are a Marconi Q-meter (with separate local oscillators) or a Boonton 250A R-X bridge, which has its pros and cons compared to a Q meter but which will bring home the bacon on coil work just as well.

>
> If I can get it cheap at the auction maybe I'll take it home.
\$50 for starters if it is working. More if it's got some standard coils with it. At \$100, I'd start wondering if I weren't paying big bucks, and would expect some standard coils for any more than that.

To give you a comparison, I paid \$40 for a dead Boonton 250A RX meter the moment it came out from under a tarp---no haggling. A couple of hours and it was working and calibrated (courtesy WWV), and it earned its cost back in about ten minutes solving a coil problem in an old receiver that resisted analysis with signal generator/VTVM and grid dip work. If you are going to do anything at all with coils, a Q meter is something to make space for---it's a pretty basic box.

>
> I think they are some old big HP O-scopes, but I'm not into
> those so have no idea if they are worth bidding on.

>
Early HP scopes are not particularly good. They got into the scope

business in the late 50's to give their reps a scope line to replace the Tek line, when Tek went to direct marketing, and it took them several years to learn how to build a scope.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Wed Jun 14 12:55:07 1995
Date: Wed, 14 Jun 1995 07:55:07 -0500
Message-Id: <m0sLreu-00003kC@next3.acme.ist.ucf.edu>
From: clarke@acme.ist.ucf.edu (Thomas Clarke)
Subject: Re: Q-meter Worth

Thanks for all the advice on the Boonton Q-meter.

Unfortunately I got to the surplus sale all primed to bid knowledgeably on the meter, and discovered that the Univ Surplus Dept had bundled everything up in pallet-sized piles covered with plastic wrap. Search as I could, I could not find the Q-meter in any of the pallet piles. Maybe someone from another department grabbed the meter before the sale.

As someone commented the strategy seemed to be to put some computer gear in each pallet to insure that someone would buy each pile. The buyer would then have the problem of disposing of old lecterns, old notebooks or typewriters or whatever.

Oh well. Maybe next year.

Tom Clarke
KE4VFH

From boatanchors@theporch.com Wed Jun 14 22:25:12 1995
Date: Wed, 14 Jun 1995 17:25:12 -0500
Message-Id: <120043@w5ddl.aara.org>
From: n5off@w5ddl.aara.org
Subject: R-390A's built in 1984

Fowler R-390A Employees

I had a phone discussion with a gent in New York the other day who was one of the last employees at Fowler Industries. They were the company that built some R-390A's for Avondale Shipyards in 1984.

Anyway, here are some of the tidbits that he mentioned.

Fowler was formerly the Clavier Company, and had built 390A's in the sixties. They still had some tools around since they were currently in the business of building glideslope receivers. They also built spare 390A power supplies. He thought that Clavier may have also been Capehart, located on Long Island in previous years, but wasn't sure.

They got the contract from Avondale in 1984, and built two orders worth, about six sets in each order.

They actually cut new metal for all the scratch built parts, and bought components where they could. The line level meters used had an external zero set as an example of an oddity. They got the counters from Veeder-Root. They had trouble getting new mil-spec tubes he said (heck, they should have posted a note here).

He said for two batches of six radios, the material costs came to (are you sitting down?) \$20,000 per radio.

The original owner of the company sold out in 1990, and is now residing in Israel. He said the new owner has since passed on.

Fowler had about 25 employees at the time, and none were hams save for one guy at the soldering station. They have no drawings or anything left.

I sent the gent some 390A articles hoping to stimulate a little more recollection from him. I'll post anything I find. The info will appear in ER at a later day, compliments of Les Locklear who is compiling the various bits of data from different contributors.

73 de tom n5off

From boatanchors@theporch.com Thu Jun 15 00:56:05 1995
Date: Wed, 14 Jun 1995 19:56:05 -0500
Message-Id: <74918.ddillman@igc.apc.org>
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: RA-17L Arrives!

I've just returned from a trip abroad to find that my long-awaited RACAL RA-17L (and RA-137 LF converter) had arrived while I was gone. What a nice welcome home present! I made a special trip to Leeds to buy these units in November of last year - and they were lost at Heathrow. So the arrival of the replacements was a long anticipated event.

But I actually have a question in addition to sharing news of my new acquisitions.

Being one of those who think everything British is great, I specifically wanted the British L model with all its funny connectors and strange (to me) tubes... ah, I mean valves. I'd always hoped that at least some of them had US equivalents. Now that I have equipment with many CV prefix tubes, I wonder... Are there in fact US equivalents and, if so, is there a list of equivalents available?

Dick Dillman
"If I Can Lift It I'm Not Interested"
<ddillman@igc.apc.org>

From boatanchors@theporch.com Wed Jun 14 19:12:06 1995
Date: Wed, 14 Jun 1995 14:12:06 -0500
Message-Id: <803158132.F00003@leotech>
From: Peter.Ferrand@leotech.mv.com (Peter Ferrand)
Subject: Radiomarine for sale...

Frank C. Gilmore Jr. writes:

UU>Pete do you have any documentation on this receiver?? Thought I knew
UU>most of RCA's but that is a new one on me. Crystal freq formula might be
UU>the hardest to come up with.

Thanks to you and everyone else who's queried on this - dibs are held by Bob, NA4G and I'm awaiting his check.

I guess I've learned to think like a computer...if I don't mention docs, there are no docs (!). I'm a stickler on having docs for everything I use, but stuff like this I've never gotten to, well, since it didn't come with any, that's the way it is.

Crystal freq can probably be scoped out - there's a 1245 KC crystal in the IF chain, and the second IF's probably 455 or so. Personally,

I'd just plug in a bunch of junk box crystals and see. Since the set's also tunable over the same range, it would be easy to see what it's doing once I got the tunable parts working.

Also tnx to all for the kind comments on the Central Electronics thing I typed in.

-Pete
WB2QLL

* Origin: NETIS Public Access Internet (603)432-2517 (1:132/189)

From boatanchors@theporch.com Wed Jun 14 07:51:39 1995
Date: Wed, 14 Jun 1995 02:51:39 -0500
Message-Id: <Pine.A32.3.91j.950614000228.47319C-100000@homer06.u.washington.edu>
From: "'AB7HI' Stephen Lee" <slee@u.washington.edu>
Subject: RF Meters

A while back I occasioned upon a dumpster which looked to be containing a few boatanchor treasures. Without much hesitation, I dove right in. Surfacing, I came up with three RF panel meters and one Type 130 L,C Meter manufactured by Tektronix.

Allow me to describe the RF meters and then, please, send me your recommendations on how best to put these to use. In the last digest, I read a post about an RF thermocouple possibly for sale. I believe these meters require an RF thermocouple of some sort. I've made thermocouples before, mostly type K. How does an RF thermocouple differ from the generic thermocouples that I've made?

OK, here are the meter descriptions:

Meter #1: General Electric brand, Model 8D044, Type D0 44,
0 to 50 amps scale, looks to be log scale compressed
at the "0" end, scale reads 0-20-30-40-50, mid scale
is 35. Also written in fine print on the face is:
External Thermocouple No A5771
US Navy Type CG 22041

Meter #2: Weston Model 507, No (blank..no number), Amp RF,
0 to 3 amps scale, looks to be log scale compressed
at the "3" end, scale reads 0, .5, 1, 1.5, 2, 2.5, 3,
mid scale is 1.5. Also written on the face is:

Sangamo Electric Co.
Springfield, Ill USA

Meter #3: General Electric, Antenna Current Indicator, Type DW-52,
Model 8DW52AAA1, Made in USA, 0 to 10 Amps scale, looks
to be linear scale, scale reads 0-2-4-6-8-10, mid scale
is the tertiary mark for 5.

The Tektronix LC meter was last calibrated in 1973...woof. This
unit has no less than five of those notorious 6U8 tubes. All check
so-so...no hard failures. In addition there is a 6BE6, 6BH6, 6X4,
and 6BQ7A and these all check so-so as well. The LC meter measures
in ranges of 3-10-30-100-300 uuF as well as 3-10-30-100-300 uH.
There are five adjustment pots inside this unit....hmmmm there are
five ranges...obviously one pot per range but there are two modes.
OK, anyone out there got a calibration sheet for this puppy? I'm
curious to know if it can be brought back into spec and be functional
once again.

Thanks to all!
Stephen Lee
AB7Hi

From boatanchors@theporch.com Wed Jun 14 13:30:15 1995
Date: Wed, 14 Jun 1995 08:30:15 -0500
Message-Id: <Pine.SUN.3.91.950614062528.956A-100000@coyote.rain.org>
From: "Ray L. Mote" <rmote@rain.org>
Subject: Re: RF Meters

On meter #1, (CG-22041), you are correct regarding the external
thermocouple. The nomenclature was first assigned by the Navy on 17
December 1931, for "general radio use" (no specific model mentioned).
Unfortunately, no information is given on the required thermocouple.

From boatanchors@theporch.com Wed Jun 14 17:49:10 1995
Date: Wed, 14 Jun 1995 12:49:10 -0500
Message-Id: <9506141344.aa20376@FSAC3.PICA.ARMY.MIL>
From: Clark Fishman (FSAC) <cfishman@fsac3.pica.army.mil>
Subject: Sliderule

a slide rule is great for scratching your back..eat your heart out HP....

WA2UNN

From boatanchors@theporch.com Thu Jun 15 01:32:09 1995
Date: Wed, 14 Jun 1995 20:32:09 -0500
Message-Id: <Pine.3.89.9506141827.A3027-01000000@netcom5>
From: paul Veltman <veltman@netcom.com>
Subject: Re: Sliderule

On Wed, 14 Jun 1995, Clark Fishman wrote:

> a slide rule is great for scratching your back..eat your heart out HP....
>
>
> WA2UNN
>
>

With a "slip stick", you don't have to worry about seeing the display in the bright sunlight, and the batteries going dead at an inconvenient time.

Oh, and I still use smith charts also. :-)

Paul
WA6OKQ

From boatanchors@theporch.com Thu Jun 15 04:08:20 1995
Date: Wed, 14 Jun 1995 23:08:20 -0500
Message-Id: <199506150335.XAA07348@kanga.INS.CWRU.Edu>
From: bz649@cleveland.freenet.edu (Kenneth V Zichi)
Subject: Re: Tubes

Don Mertz said:

Well, I think I can confirm anybody's suspicion that vacuum tubes are no longer common knowledge.

To which cfishman@fsac3.pica.army.mil said:

>What do people think that big screen in front of the TV is....

story time: My 20something secretary commented about my penholder shortly after she hired in (I have a bunch of dud receiving tubes on a block of walnut with a pen holder stuck in the middle -- what else

for someone with our affliction?) by asking "what are those"
I too bit my lip, but responded "they are radio tubes". Somebody
must have told her about my tendency to pull legs and said -- 'cmon,
how gullible do you think I am : I mean, TVs use tubes -- NOT radios.

I had to bring in an old RCA T6-11 to convince her I wasn't kidding,
but I don't think she really 'gets' it even now.

On the other hand, MY daughters (age 4 and 8 thank you) BOTH know
tubes -- AND 78s AND Edison disks and cylinders. In fact, my oldest
daughter even recognizes 6H6s (she thinks they are 'cute') but I
am sure that they are the ONLY ones in their age group who do....

In fact, one of the 8 year old's best friends commented about the
"big table" near the door to our living room (an RCA 1930s console radio)
that she's walked past a hundred times by saying 'where's that noise coming
from' when she came over for a visit when I had it on. My daughter said
'that's one of my Dad's old radios' to which the response was 'why's it
so BIG?' They both got a (nice!) lecture and got to look inside it
and gawk at all the pretty glowing tubes inside.

Now, as for you who are only now teaching your teenagers about such
things.... shame on you! Get out there and do some propagandizing
for old stuff in general and BAs in particular. If we don't encourage
the love of this stuff, it WILL die with us.

73 //kvz

--

73 //kv zichi bz649@Cleveland.FreeNet.edu

From boatanchors@theporch.com Wed Jun 14 16:04:59 1995
Date: Wed, 14 Jun 1995 11:04:59 -0500
Message-Id: <01HROZP6QZXE9KT0ZL@RANDB.PPRD.Abbott.Com>
From: KANAMAA%AMGATE%MATRXA@randb.pprd.abbott.com
Subject: Tubes forever

From: Kana, Michael (D9CY)
Date: Wed, Jun 14, 1995 11:01 AM
Subject: Tubes forever
To: bigboats
Howdy all

Re the earlier thread on no more tubes, I was going to mention that
there is still a big market for TWT's and special purpose tubes.
(i.e. high power at microwaves)

I guess there will still be tube manufacture in the countries where most of their com gear still uses tubes (i.e. Russia, India, China, etc...)

While at the Barnes and Noble book store, I saw two magazines dealing with high end audio gear that uses tubes. I might look into this so my stereo can glow as well (oh no! another <expensive> hobby....)

73's de AA9IL
Mike Kana

From boatanchors@theporch.com Wed Jun 14 19:32:25 1995
Date: Wed, 14 Jun 1995 14:32:25 -0500
Message-Id: <199506141931.0AA21792@wrdis01.robins.af.mil>
From: lakeith@wrdis01.robins.af.mil (Larry Keith)
Subject: Who built the 167BY CW Transmitter?

In an ad in the January, 1948, issue of CQ Magazine, an outfit called Eletronicraft of Tuckahoe, NY, is trying to sell some surplus CW Transmitters which were "built by one of the foremost transmitter manufacturers for use on Liberty ships." Since there were (I am told) thousands of Liberty ships, a few of these transmitters must have survived.

The rig looks interesting. Built in a rack cabinet 69" high x 29" wide x 19" deep. Ad says "Beautiful dark grey wrinkled finish."

Specs:

200 watts CW (2-16 mcs), 150 watts (16-24 mcs).
choice of 10 xtal positions or VFO.

High Stability VFO

Tubes: 76 VFO, 6L6 buffer amp, 6L6 doubler, 6L6 doubler-tripler, parallel 813's final amp.

pi antenna network, built in shock mounted keying relay and key.

built in filament transformer for all tubes.

Space provided for receiver (18" wide x 19" deep x 24" high)

Entire lower compartment of cabinet available for power supply, modulator, etc. Space 29" wide x 19" deep x 24" high.

Demountable, chromium-edged, linoleum-covered operating shelf. (You

can't get those kind, any more!)

etc...

So, for the "new" rig, 2 sets of tubes, and 3 boxes of spare parts, one had to pay the horrendous price of \$187.50. Looks like total shipping weight was about 750 lbs...

Anyhow, back to my original question. Who made this rig?

73,

Larry, Kq4BY

From boatanchors@theporch.com Wed Jun 14 20:15:17 1995
Date: Wed, 14 Jun 1995 15:15:17 -0500
Message-Id: <199506142012.QAA05765@cc01du.unity.ncsu.edu>
From: rdkeys@unity.ncsu.edu
Subject: Re: Who built the 167BY CW Transmitter?

>
> Anyhow, back to my original question. Who made this rig?
>
> 73,
>
> Larry, Kq4BY
>

The 167 series transmitters.....

It was built by MacKay (ITT MacKay, now MacKay Communications of Raleigh, NC).

I run its RCA prewar brother (ET-8019A) for my CW rig.

>From about 1937 through 1965, they changed VERY little, generically.

Bob/NA4G

p.s. If you ever see one or its Radiomarine equivalent (3U, 4U, 5U, 6U) let me have dibs, OK? Marine radios are my bag of toys. BIG, BAD, and UGLY, but very easy to work on. One can READ the schematic from a lookie-see of the rig. They are simple and forgiving rigs. They are not known for great stability above the 8000 Kcs band.